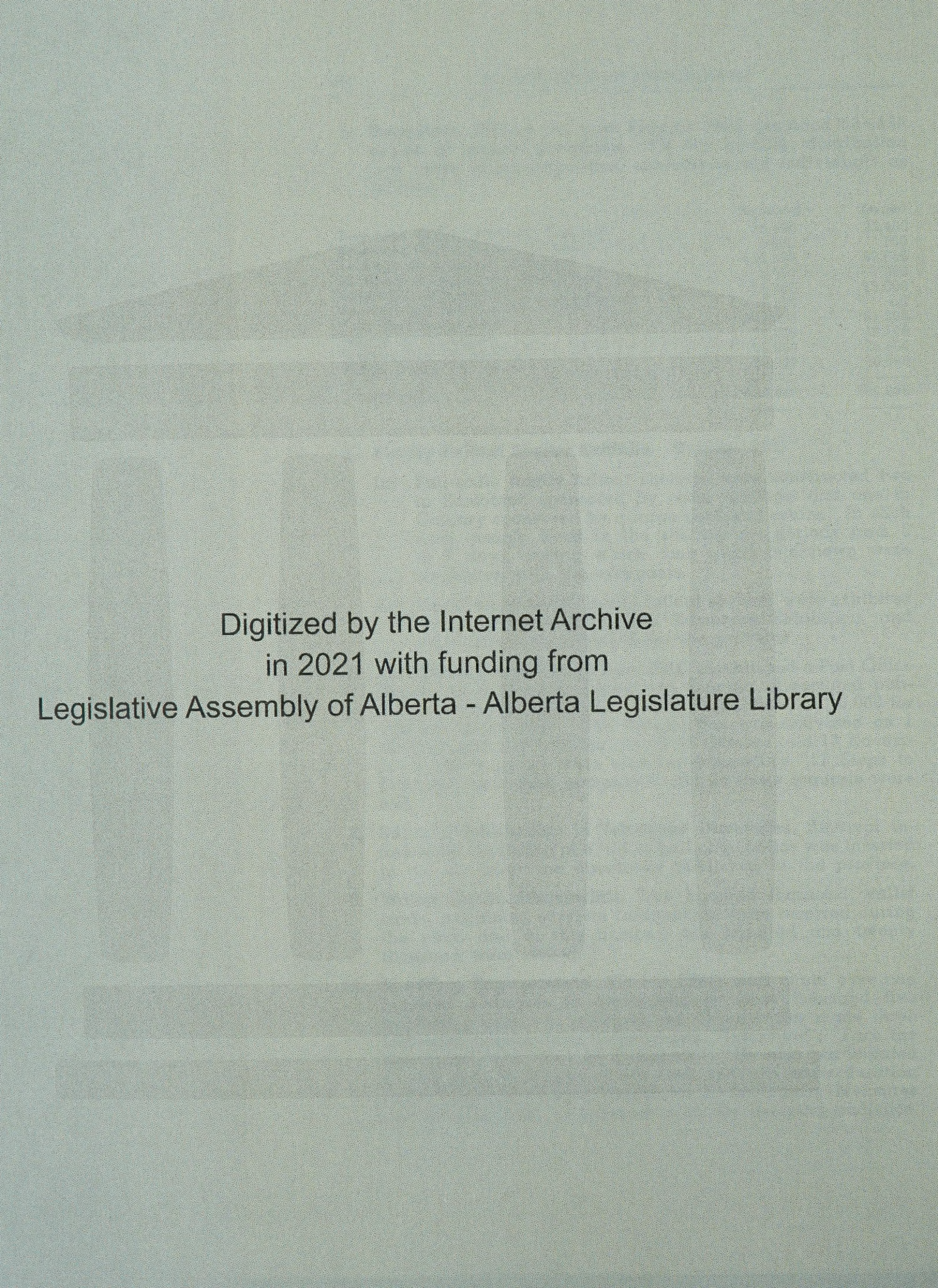


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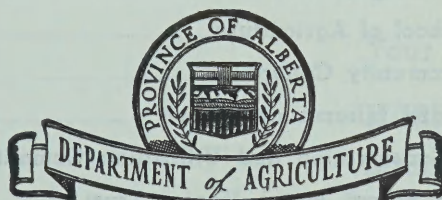


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ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1962



PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON, ALBERTA

Printed by L. S. WALL, Queen's Printer for Alberta

1963

ANNUAL REPORT OF THE DEPARTMENT OF AGRICULTURE

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1937

Report of the Deputy Minister

(in 1962)

HONOURABLE HARRY E. STROM

Minister of Agriculture

To HIS HONOUR,

J. PERCY PAGE,

Lieutenant Governor of the Province of Alberta.

Sir:

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1962.

I have the honour to be, Sir,

Your obedient servant,

HARRY E. STROM

Minister of Agriculture

Report of the Deputy Minister

(R. M. Putnam)

The HONOURABLE HARRY E. STROM,

Minister of Agriculture

Sir:

I have the honour to submit the annual report of the Alberta Department of Agriculture for the year ending December 31, 1962.

Although below average in the southeast, crop yields were higher than in 1961 in most areas. The most serious limiting factors were drought in a small area of the southeastern part of the Province and frost in the north. The incidence of hail was rather widespread, but below average in total damage. A grasshopper infestation was more widespread than originally forecast, but control measures adopted were generally quite effective. Cattle numbers were maintained but the hog and sheep populations declined somewhat from the previous year.

Cash income from the sale of farm products, the highest on record in 1961, increased again in 1962. Livestock and grain receipts accounted for most of the increase. Revenues from poultry and eggs also increased slightly, while dairy receipts were maintained. In a general way, 1962 was considered to be a favourable crop year.

A very important event for the Department was a change of Ministers. After serving since January 1, 1954 as Minister of Agriculture, the Honourable L. C. Halmrast assumed the portfolio of Minister of Public Welfare on October 16th and the Honourable Harry E. Strom was named as his successor. Of some importance and of general consequence were developments in the ARDA program. Several meetings were held during the year with officers of the Canada Department of Agriculture to discuss projects. In September, the draft of a general agreement was presented for consideration of the Province. This agreement was signed, and by the end of the year drafts of five project agreements had been submitted to the Province for consideration and study.

In October of this year an application was received from the Alberta Potato Growers Association for the establishment of a potato marketing board. At the year's end a plan had been drafted and the Department was in process of conducting a plebiscite to determine if the plan would be adopted.

Further work was done at the Brooks Horticultural Station on the production, packaging and grading of fresh vegetables. In the field of irrigation, the construction of trunk drains in the St. Mary and Milk Rivers Development and the Bow River Projects was continued.

During the 1962 Session of the Alberta Legislature, the Department of Agriculture presented one new bill for consideration, The Soil Conservation Act. This Act was adopted, and minor amendments to several other Acts were made.

The principal staff changes were as follows: Mr. Gordon R. Sterling, Chairman of the Land Conservation and Utilization Committee, was also named Co-ordinator of the Alberta ARDA Program.

On April 1, 1962, Mr. R. E. English, Agricultural Statistician, and his staff were transferred from the Extension Service to the Farm Economics Branch.

Mr. W. S. Baranyk was named Principal of the School of Agriculture and Home Economics at Vermilion on November 1st. He succeeded Mr. N. N. Bentley, who resigned in September to accept a position with the Food and Agriculture Organization in Rome. Mr. Bentley first joined the Department in 1936 and had served continuously for this period of time.

On March 24, Warren W. Weismer and John Andrews were appointed as Senior Commentator Writer and Commentator Writer, respectively, to succeed E. V. Hamula and Scott Flewitt, who resigned from their positions.

The number of members of the permanent staff of the Department at December 31, 1962, was as follows:

	1961	1962
Technical and professional staff	219	239
Other staff	373	330
Total staff	592	569

The decline in total staff resulted from the transfer of the Emergency Measures Organization (Alberta) from the Department of Agriculture to the Department of Public Welfare on October 15th.

I should like to express my appreciation for the guidance and counsel which you and your predecessor extended to me during the year. I also wish to express appreciation to all members of the staff of this Department for their co-operation, devotion to duty and a job well done.

Finally, on behalf of all officers and staff of the Department of Agriculture I wish to thank those many individuals, institutions and organizations who in various ways have assisted the Department to carry forward its programs and policies for the benefit of all the people of the Province.

Respectfully submitted,

R. M. PUTNAM,

Deputy Minister.

Report of the Field Crops Branch

- A. M. WILSON, B.A., B.Sc., M.Sc., P.Ag., Commissioner
O. G. BRATVOLD, B.Sc., P.Ag., Crop Improvement
L. G. JORGENSEN, B.Sc., P.Ag., Special Crops
W. LOBAY, B.Sc., M.Sc., P.Ag., Soils and Weed Control
A. W. GOETTEL, B.Sc., M.Sc., P.Ag., Asst. Soils and Weed Control
J. B. GURBA, B.Sc., P.Ag., Crop Protection and Pest Control
J. PROCTER, B.Sc., M.Sc., P.Ag., Asst. Crop Protection and Pest Control
P. D. McCALLA, B.Sc., P.Ag., Horticulture
P. D. HARGRAVE, B.Sc., M.Sc., P.Ag., Supt. Horticultural Station, Brooks
T. KILDUFF, B.Sc., M.Sc., P.Ag., Asst. Supt., Horticultural Station, Brooks
S. MOLNAR, B.Sc., M.Sc., P.Ag., Horticultural Station, Brooks
J. W. EDMUNDS, B.Sc., P.Ag., Apiculture
F. S. GODDARD, B.Sc., P.Ag., Special Projects
D. STELFOX, B.Sc., P.Ag., Crop Clinic

REPORT OF THE FIELD CROPS COMMISSIONER

A. M. Wilson

The yield per acre of major crops was above the long-term average, wheat 19.3 bushels compared to 19 for the long-term average, oats 46.5 compared to 35.3 bushels and barley 31.3 bushels compared to 26.5. The acreages of wheat increased by 174,000, oats by 316,000 and barley declined by 28,000. There was a general decrease in the acreage of oil seed crops, namely flax, rape and mustard.

Farmers had more freedom of choice in planting crops. The short crop of 1961 permitted less restricted delivery quotas and farm held grain was more a matter of inclination than necessity. The shortage of coarse grains curtailed livestock feeding and farm to farm prices of grain rose sharply.

Range lands in the south-east continued dry until mid-summer. There was very little snow for run off and water and grass shortages appeared imminent. Heavy rain on the 13th, 14th and 15th of July, amounted to an inch and more over this area and in excess of six inches from Hanna north to Bonnyville. Subsequent rains followed although too late to improve native grass. The moisture brought on weeds and range land grew up to lambs quarter and other annuals. Most of the grain was too far advanced to benefit appreciably and here too lambs quarter became the predominant growth. Crop yields varied from nil to 15 bushels per acre with an average at about 5 bushels. A freight assistance policy on fodder was again initiated to assist in maintaining cow herds in the drought area south of Highway 9. The need of regrassing and careful management of range was stressed if cattle populations were to be maintained.

Rainfall, north of a line east and west through Drumheller, was above normal. The Hanna-Coronation country exceeded normal by seven inches. Many other areas north even to Fort Vermilion had similar increases. Most of this rain came after mid-July consequently crop maturity was delayed and the heavy crop was damaged by frost on the 4th and 5th of September. Yields were not appreciably reduced but the quality was adversely affected. It is estimated that 43% of the wheat graded 4 or lower.

The following table gives the area, yield, and production of the principal field crops for 1962 compared with 1961.

	Area		Yield per Acre		Production	
	1961 — '000 ac. —	1962	1961 — bu. —	1962	1961 — '000 bu. —	1962
Wheat	5,633	5,807	15.8	19.3	89,000	112,000
Oats	2,330	2,646	36.9	46.5	86,000	123,000
Barley	2,867	2,839	26.9	31.3	77,000	89,000
Mixed Grain	374	367	30.1	36.8	11,257	13,500
Fall Rye	149	179	14.1	15.6	2,100	2,800
Spring Rye	25.3	30	7.9	13.2	200	400
All Rye	174.3	209	13.2	15.3	2,300	3,200
Flaxseed	362	299	11.0	10.0	4,000	3,000
Peas (dry)	8.8	7.8	14.9	17.2	131	134
Potatoes:			— cwt. —		— '000 cwt. —	
Commercial	13.14	13.16	149.7	148.8	1,967	1,958
Home Garden	7.76	8.84	74.5	133.5	578	1,180
			— lb. —		— '000 lb. —	
Mustard Seed	69.2	52	235	583	16,300	30,000
Rapeseed	307	212	857	774	263,000	164,000
Sunflower Seed	3.4	—	811	—	2,757	—
			— tons —		— '000 tons —	
Tame Hay	2,477	2,626	1.28	1.52	3,171	4,000
Sugar Beets	39.5	40.3	13.29	13.20	525	532

The soil Conservation Act was passed by the legislature. It defined by law the responsibility of land owners in maintaining and conserving soil resources. Farm organizations requested and supported the legislation to provide a more positive approach for control and prevention of soil erosion. Municipalities have accepted the responsibility for local administration through their Agricultural Service Boards.

Assistance under the Educational Leave Program to Mr. Adolph Goettel to obtain his Master's Degree in Soils at the University of Alberta is gratefully acknowledged.

CROP IMPROVEMENT

CROP IMPROVEMENT DEMONSTRATION POLICY

Five Crop Improvement Projects made up the policy. Two Projects were discontinued in 1962; viz., Project A—Forage Seed Production and Project E—Crop Variety Demonstrations. The five projects in use were designed to aid District Agriculturists in demonstrating the value of using recommended kinds and varieties of crops, the proper use of fertilizers and the use of improved cultural practices.

PROJECT B—PASTURE IMPROVEMENT

The Project was continued to increase farmer interest in the need for better pastures. One hundred and twenty-nine applications were submitted and 16,240 pounds of seed distributed.

PROJECT C — BALANCED FARMING

This project was used to demonstrate to farmers the value of adapting suitable crop rotations. Assistance by providing forage seed was given in the second year of rotation, at a discount of 25 percent for 1/6 of the acreage up to a maximum of 25 acres. There were thirty-three applications and a total of 6,750 pounds of forage seed was distributed.

PROJECT D — FIELD DEMONSTRATIONS, CROPS AND FERTILIZERS

Under this Project seed was supplied directly to the District Agriculturist without cost for demonstrating the value of different kinds and varieties of field crops, and where advisable the use of fertilizers on these crops. A total of 883 pounds of forage seed was supplied to 12 applicants.

PROJECT F — SOIL AND CROP IMPROVEMENT ON GREY-WOODED SOILS

This Project was provided to demonstrate to farmers the importance of forage crops and fertilizers in the successful management of grey-wooded soils. A total of 32,285 pounds of seed was distributed to 82 applicants.

PROJECT G — NEW VARIETY OR SPECIES DEMONSTRATION PROJECT

This Project was continued in 1962 and was used to demonstrate the value of new varieties or species of forage crops. Sixty-four farmers were provided with 2,955 pounds of seed.

FORAGE CROPS SEED PRODUCTION

Forage seed production declined in 1962. Acreage of fescue decreased as a result of poorer market prospects. Frosts in early September damaged much of the legume crop causing lower grades and decreased yields. This was followed by very poor harvesting weather in the Peace River area. Prices for forage seed were generally stronger than a year earlier. The following figures give the seed production of the most important crops in the years 1958 to 1961 inclusive with preliminary estimates for 1962.

	1958	1959	1960 Thousand Pounds	1961	1962
Alfalfa	1,800	1,427	1,880	2,723	1,500
Sweet Clover	5,000	2,330	750	7,205	4,000
Red Clover	4,835	2,622	4,250	4,113	2,000
Alsike	10,000	4,647	9,225	11,275	8,500
Timothy	1,000	1,154	840	591	400
Crested Wheat	475	750	736	606	330
Brome	5,000	7,753	4,000	3,939	4,000
Creeping Red Fescue	13,250	11,878	12,100	17,046	8,500

PRODUCTION OF REGISTERED SEED**Cereals and Flax**

The following table summarizes the estimated yields in bushels of cereals and flax inspected for registration and certification.

	1958	1959	1960	1961	1962
		Estimated Yield (in thousands)			
Wheat	3,830	3,477	2,802	1,301	929
Oats	839	987	1,229	1,209	1,490
Barley	1,803	1,079	597	481	526
Flax	722	344	210	101	64

Forage Seed

The table below is a summary of reported acreage of grass and legume crops inspected for registration or certification:

	1958	1959	1960	1961	1962
Brome (Parkland)	—	10	10	10	—
(Lincoln)	—	215	235	80	20
(Manchar)	—	38	38	38	—
(Carlton)	—	—	—	—	18
(Fischer)	—	—	—	—	355
(Saratoga)	—	—	—	—	32
Creeping Red Fescue (Olds)	30	262	877	881	1,471
(Duraturf)	—	346	259	—	109
Crested Wheatgrass (Summit) ..	1,059	977	860	732	463½
(Nordan) ..	135	178	638¼	1,238	1,317
(Fairway) ..	726	501	343	50	170
Timothy (Climax)	2,563	9,006	3,145	1,769	2,218
Alfalfa (Vernal)	138	297	262	251	225
(Rambler)	325	438	531	818	907½
(Grimm)	22	—	35	110	50
(Ladok)	5	—	75	—	46
Red Clover (Altaswede)	—	57	21	15	—
(LaSalle)	782	261	469	597	364
(Aurora)	—	—	—	—	619
Sweet Clover (Cumino)	—	33½	—	362	—
Kentucky Bluegrass (Merion) ..	502	166	597	164	157
Orchard Grass (Chinook)	—	—	73	205	317

DISTRIBUTION OF FORAGE SEED

During 1962 the Field Crops Branch contracted the production of Certified Rambler alfalfa seed in the State of Washington. Yields were low and consequently only 10,000 pounds was produced.

As in previous years the Field Crops Branch co-operated with the Canadian Forage Seeds Projects in the distribution and multiplication of Breeder and Foundation forage seed. The following quantities were distributed:

Breeder:

Beaver alfalfa	10 lbs.
Vernal alfalfa	200 lbs.
LaSalle red clover	90 lbs.
Climax timothy	150 lbs.

Foundation:

Rambler alfalfa	1,552 lbs.
Olds Creeping Red Fescue	25 lbs.
Nordan Crested Wheatgrass	335 lbs.
LaSalle red clover	225 lbs.
Frontier reed canarygrass	85 lbs.
Climax timothy	585 lbs.
Saratoga bromegrass	450 lbs.

In order to facilitate the early cleaning of seed produced under contract to the Canadian Forage Seeds Project, the Branch has installed cleaning equipment at the Oliver Tree Nursery. The Project has required all contract seed cleaned by February 1st of the year following production, and has now advised of its intention to change this to January 1st for future contracts.

Efforts had been made to have this work done by the Seed Trade. Because of the urgency of export commitments by the Trade they could not undertake to custom clean Project seed until late in the season.

A new gravity mill and a dodder mill were installed. The old wind and screen mill was repaired and a new set of screens purchased thus completing the line for legume seeds. The first lots of seed were cleaned in early December.

THE ALBERTA VARIETAL ZONATION COMMITTEE

This Committee continued to test different varieties for suitability to different Soil Climatic Areas. The annual meeting was held in December and the following changes were made in the cereal recommendations:

Jubilee barley was added to Zones 2B, 2C, 2D, 3A and 3B. Betzes barley was added to Zones 2B, 2D, 3A, 3B and 4A.

Glen oats was added to and Garry deleted from the recommendations for Zones 2C and 2D and Larain was deleted from Zone 4A.

There were no changes in the recommendations for wheat or flax.

FORAGE CROPS ADVISORY COMMITTEE

This Committee held its annual meeting in December at which research, plant breeding, extension and promotion of forage crops was discussed.

THE SEED DEALERS ACT

Twenty-six seed dealers were licensed under the Act.

THE SEED CONTROL AREAS ACT

Two seed control areas were in operation within the Province, namely, the Hays Seed Control Area and the Wanham Seed Control Area.

OTHER ACTIVITIES

Numerous inquiries re all phases of crop production were answered by correspondence, telephone or office visits. Several talks were given on radio and at Agricultural Short Courses.

A Pasture Improvement Program was continued in the Edmonton Milk Shed and 48 farms were entered. This program was designed to focus attention on the need for more grassland cropping and better management practices.

Other activities included judging at Seed Fairs and 4-H Achievement Days, preparing articles for Agricultural Notes and assisting in the preparation and revision of publications.

THE ROYAL AGRICULTURAL WINTER FAIR—TORONTO

The Department continued its policy of assisting exhibitors at the Royal Agricultural Winter Fair, Toronto. The Field Crops Branch assembled and shipped exhibits to the Show paying the shipping costs both ways. In addition to supervising the exhibits at the Show all prize monies won by Albertans at the Royal were increased by 50%. A special honorarium of \$25.00 was paid for each first prize in the classes for wheat, oats, barley, rye, flax, alfalfa, alsike, red clover, sweet clover, brome, fescue, timothy, crested wheatgrass, field beans, russet (netted gem) seed potatoes, potatoes in the Vegetable and Cooking classes and 4-H

Club exhibits. Such honoraria was increased to \$100.00 for championships won with exhibits of wheat, oats, barley, rye and forage seeds.

The names of the 1962 winners at the Toronto Royal Winter Fair were as follows:

World Championships:

Wheat (Chinook)	Fred W. Hallworth	Taber
Two-Rowed Barley (Compana)	Mrs. Martha Jussila	Manyberries
Oats (Victory)	Myron D. Zacharko	Bruderheim

Reserve Champion:

Wheat (Chinook)	George Luco	Lethbridge
-----------------------	-------------------	------------

Champion:

Winter Wheat (Winalta)	E. C. Allen	Barons
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First Prizes:

Wheat (Hard Red Spring)	Fred W. Hallworth	Taber
Wheat (Hard Red Winter)	E. C. Allen	Barons
Wheat (Durum)	Ralph L. Erdman	Lethbridge
Two-Rowed Barley (Compana)	Mrs. Martha Jussila	Manyberries
Bromegrass	Irene J. Bullick	Coronation
Sheaf Oats	Carl M. Brown	Rolling Hills
2nd Cut Hay (Grass & Legume)	W. C. Schaefer	Innisfail
Oats	George A. Lamb	Cherhill
Barley (6-Rowed Variety)	John Nikkel, Jr.	Coaldale
Potatoes (Netted Gem)	T. Fujimoto & Sons	Rainier
Wheat (4-H Member)	Leslie Olsen	Munson
Oats (Victory)	Myron Zacharko	Bruderheim
Potatoes (Cooking)	T. Fujimoto & Sons	Rainier

FODDER AND FEED GRAIN ASSISTANCE POLICY

The Federal-Provincial Policy for the sharing of transportation costs on fodder and feed grain to farmers in southern Alberta, which was initiated in 1961 was continued until March 31, 1962. Details of this Policy were outlined in the 1961 report.

A total of \$295,916.37 was paid out to farmers under this policy in 1962 on 30,957 tons of fodder and 6,212 tons of grain. From the time of the Policy's inception in 1961 until it expired March 31, 1962, total assistance amounted to \$382,977.39 on 47,462 tons of fodder and 9,842 tons of grain.

Although conditions were considerably improved in south-eastern Alberta in 1962 there was, nevertheless, a shortage of fodder in the area. Consequently a Federal-Provincial Policy was again brought in to effect on August 1st, 1962, but on a more limited scale.

Assistance was provided on transportation of fodder up to a maximum of 50 tons per farm or ranch. The basis of payment was 4¢ per ton-mile, one-way travel, for the distance in excess of 40 miles, up to a maximum of \$6.00 per ton on hay and \$3.00 per ton on straw.

The assistance was available to farmers or ranchers residing within the following areas:

Improvement District No. 11

Improvement District No. 22

County of Forty Mile No. 8

County of Warner No. 5 (East of Range 15)

Special Areas No. 2 and 3 south of Highway No. 9.

Total assistance provided in 1962 under this policy amounted to \$3,488.73 on 1,556.1 tons of fodder.

SPECIAL CROPS**ACREAGE OF SPECIAL CROPS IN ALBERTA**

	1961	1962
Potatoes	14,000	14,000
Onions	200	250
Sweet Corn (Fresh Vegetable Trade)	600	580
Cabbage (Fresh Vegetable Trade)	300	300
Carrots (Fresh Vegetable Trade)	300	375
Cucumbers	350	275
Turnips	400	400
Beans (Fresh and Canning Trade)	200	700
Sunflowers	4,000	2,800

POTATOES

Marketable yield per acre was 100 cwt. This yield was the same in 1961. A total of 8,600 acres of potatoes were grown in the irrigated areas of southern Alberta. This past year a good crop of potatoes was produced in Manitoba and Saskatchewan. This fact, combined with a court injunction preventing operation of a local potato dehydrating plant, has placed an additional 450,000 cwt. of potatoes on the fresh market. This has resulted in very low prices to producers.

As a result of the low prices the Alberta Potato Growers Association has requested a referendum on a Marketing Board. This will likely be held in February, 1963.

In addition to the Alberta Potato Growers Association the vegetable growers have formed an association called the Associated Fresh Pac Vegetable Growers. This is a voluntary association which was organized to speak for the vegetable growers. As well as this a Co-op was formed in Taber to market potatoes and eventually vegetables. This Co-op has 20 members and plans a new packaging and storage building next year.

ONIONS

Most of the onions were grown in the Medicine Hat and Coaldale areas. One of the major problems holding back expansion in this crop is the large amount of hand labor involved in weeding. Good weed control using chemicals will certainly aid in the development of this crop. The supply of onions from Alberta was limited with prices fair.

CORN

The corn crop was good again this year but prices were low. Early fall frosts damaged the late corn crop. Shipments of fresh corn to Edmonton from one of the southern Alberta Cannors showed that there is a good market for local corn that is pre-cooled and properly handled.

CARROTS

Carrot acreage was up. A few local growers produced fairly large acreages. They found that carrots have a ready market, when proper attention is paid to cultural practices and marketing.

CANNING CROPS

Approximately 11,000 acres were devoted to canning crops. The acreage was approximately the same as in 1961. This in-

cludes peas, beans, corn, carrots and pumpkin. As a result of disagreement between processors and the Canning Crops Marketing Board contracts were not signed until late in the season. Continued disagreement could result in more vertical integration by the canners.

GREENHOUSE CROPS

Alberta's greenhouse industry occupies 2,265,000 square feet, or approximately 52 acres. Production value was about \$5,000,000 this past year. This industry is continually expanding and is facing many problems requiring trained assistance.

OTHER ACTIVITIES

The Special Crops Supervisor addressed 32 grower meetings, short courses and field days. A total of 103 farm calls were made during the course of the year and 36 business calls on topics relating to special crops. Seven radio talks were given and five appearances were made on television.

One potato varietal trial was carried out at Rosemary. Fifteen varieties were tested to determine which were suitable for making potato chips. As a result of tests in 1961 and 1962, one seedling, F52100 appears to be the best chipping potato. This seedling will be tuber indexed this winter with the hopes of obtaining enough disease free seed to test it on a larger commercial scale. One herbicidal trial was carried out at Ccaldale. Liquid Cyanamid, Randox and C.I.P.C. gave promising results on the control of weeds in onions.

Funds were appropriated by the Provincial Government to establish a pilot plant project for fresh vegetables. Equipment and supplies, purchased or built at the Horticultural Station, included:-

1. Portable grader and washer, equipped with ice tanks and four weigh scales.
2. A packaging and grading line which is also portable.
3. A seed bed shaper and planter, equipped with fertilizer attachment.
4. Boxes and packages for the finished product.

This machinery was also used by five farmers who grew fresh vegetables. The produce placed on the market was readily accepted.

Interest in the production of fresh vegetable crops increased in the market area adjacent to Edmonton and at Grande Prairie and Peace River. One Edmonton grower mechanized his production and processing of vegetable root crops. Peace River growers increased their acreages to meet requirements of northern markets.

SOILS AND WEED CONTROL

Weeds and Weed Control

GENERAL

A late frost-free fall in 1961 permitted many farmers to work fields leaving them in good weed free condition in the spring of 1962. Moisture conditions in the spring were quite variable. It was very dry in the south-east, about average in the central and Peace River areas, and very wet in the north-east portion of the province. The month of May and most of June were cool and wet in the central and northern areas, delaying seeding and fallow operations. Many fields in this area were not sprayed because the soil was too wet to support spraying equipment. As a result weeds got ahead, and Canada and Perennial Sow Thistle showed up considerably. Fallow land was in poor condition in these areas during mid-summer.

The harvest was early in southern Alberta but delayed considerably in central and northern areas. An open fall however, until mid-November, permitted farmers to cultivate fallow and stubble land.

WEED SURVEYS

(a) There was a continuation of the survey on Canada and Perennial Sow Thistle infestations. Of 49 municipalities reporting covering an area of 22,354,000 acres of cultivated land, the following acreages were reported with varying degrees of infestation:

	Infestation (Acres)		
	Light	Medium	Heavy
Perennial Sow Thistle	3,192,000	2,690,000	975,000
Canada Thistle	3,810,000	1,754,000	2,772,000

There was some increase in the infestation of these two weeds in the north-eastern part of the province.

(b) Continued surveys conducted by 53 Agricultural Service Boards indicate the following extent of infestations of the five bad weeds (persistent perennials). Figures for 1961 are provided for comparison purposes:

Weed	Farms		Acres		Areas Heavily Infested
	1961	1962	1961	1962	
Hoary Cress	1,145	1,073	7,674	7,393	Strathmore, Lethbridge, Cardston.
Russian Knapweed	307	296	433	650	Lethbridge, Taber, Pincher Creek, Claresholm.
Field Bindweed	487	1,398	4,320	6,624	Cardston, Lethbridge, Taber.
Leafy Spurge	252	248	4,535	4,801	Cardston, Pincher Creek, Camrose, Provost.
Toadflax	7,638	6,240	37,287	38,616	Throughout the Province.

The intensified control program in a number of areas decreased in the number of farms showing Toadflax, but the acreage infested increased.

An intensive survey in the Lethbridge area revealed infestations of Field Bindweed on many more farms than was anticipated. The infestations were mostly in patch sizes.

(c) Reports obtained from District Agriculturists, Field Supervisors and Weed Inspectors indicated that Hawksbeard, Hemp Nettle and Tartary Buckwheat are increasing in some areas.

Mayweed has also increased but infestations in areas other than the Peace River region, are still confined to roadsides and other non-cultivated land.

WEED INSPECTION AND ENFORCEMENT

Ten Weed Inspectors were appointed in Improvement Districts. This is one less than in 1961. Two provincial Weed Supervisors, one located at Edmonton and the other at Vermilion, appointed for the summer months, assisted Municipal Field Supervisors and Weed Inspectors with weed control programs. Fifty-four Field Supervisors and 97 additional Inspectors were employed by municipalities. There were also about 150 part-time Weed Inspectors appointed in cities, towns and villages.

The following table shows the number of official notices served by municipal authorities and the court cases held under the Noxious Weeds Act:

Year	No. Notices to Destroy Weeds	Acres Affected	No. Notices Prohibit Seeding	Acres Affected	No. Notices Prohibit Threshing	Court Cases
1961	2,374	52,758	—	31,622	—	7
1962	2,174	48,826	497	19,954	10	1

CHEMICAL WEED CONTROL

(a) Selective Herbicides

There was 8,634,000 acres of field crops treated for weed control with selective herbicides (2, 4-D and MCPA). This was a 31% increase over last year or approximately 70% of the total acreage planted to cereal crops and flax—the highest on record. The following table shows the total acreage treated each year during the past five years.

Years	1958	1959	1960	1961	1962
Acres Treated	5,307,000	6,216,000	7,123,000	6,583,000	8,634,000

In addition 18,050 miles of road were sprayed for weeds and 4,860 miles for brush control. Approximately 1,300 miles of irrigation ditch banks were treated with herbicides. There were 26 municipalities (one less than last year) out of 54 that handled 2, 4-D, MCPA and other selective herbicides for sale to farmers. Several municipalities made arrangements with the trade to handle the chemicals, others were not involved in any sales or distribution.

(b) Soil Sterilants

The Department continued the policy of supplying soil sterilants to municipalities at cost. In 44 municipalities, this cost was shared equally with the Department, the Municipality and the farmer for control of the five persistent perennials. The maximum payment to a municipality was \$1,000.00. For the control of these perennials on municipal roads in 46 municipalities, the cost of sterilant was shared equally by the Department and Municipality, the maximum Departmental share being \$200.00 per municipality.

A total of 453,137 lb. of soil sterilant under the policy was purchased by municipalities and used for the control of patches

of persistent perennials. This is the highest on record. The kind and amount are shown below with 1957-1961 totals for comparison.

	1957	1958	1959	1960	1961	1962
Sodium Chlorate	190,449	222,656	229,040	243,040	254,688	225,232
D Bor Chlorate	18,700	57,450	90,150	111,300	94,200	129,350
Polybor Chlorate	20,090	35,265	75,340	85,300	88,403	73,930
Conc. Borasau	—	24,650	35,700	8,400	11,700	17,800
Monuron	—	—	—	2,000	—	—
Benzabor	—	—	—	—	2,000	6,825
	229,239	340,021	430,230	450,040	450,991	453,137

The above totals do not include purchases made from other sources.

(c) Spray Equipment

Low volume type farm sprayers play an important part in chemical weed control programs in the province. There were 20,432 farm owned sprayers in 1962. One feature of the 1962 provincial weed program was to promote the calibration of weed sprayers, a program which resulted in the purchase of many new sprayers by the farmers.

WEED CONTROL TRIALS AND DEMONSTRATIONS

Fifty weed control demonstrations were set out involving various formulations of selective herbicides of 2, 4-D and MCP, Avadex and Carbyne, and a number of promising soil sterilants. These demonstrations included (1) the use of propionics for chickweed and corn spurry control in crop (2) Banvel D and propionics for Tartary Buckwheat, and (3) Hyvar and Monobor Chlorate for couchgrass and toadflax.

A number of trips were made with members of the trade and farmers to the special soil sterilant project site at Millet. This project on toadflax control originated in 1960 by the joint effort of the Soils and Weed Control division, Lacombe Experimental Farm and the Service Board of the County of Wetaskiwin. New plots set out on this site in 1962 included treatments with Atrazine, Monobor Chlorate and Hyvar.

The chemical brush control demonstration project set out at Rocky Mountain House in 1961 was continued in 1962. A field day conducted in conjunction with this demonstration drew some 80 persons to see the results. Excellent control of willow was noted, increasing the grass stand significantly. New demonstrations on this project included the use of the heavy duty Rome discer, rotary blade cutter, and bulldozer as alternatives, or to be used in conjunction with spraying. The project will be continued.

WEED CONTROL WITH FORAGE CROPS

A weed control project using forage crops, known as Project 2 was extensively used in 1962. Under this project the Department shared equally with the farmer the cost of forage seed to be used on weedy areas, not to exceed 20 acres per farm, with extension to 30 acres in special cases. Each application was

approved by the District Agriculturist and the limit was 15 for each area.

The following table indicates the extent of participation by districts and the quantity of forage seed used. The years 1958-1961 are shown for comparison purposes:

	1958	1959	1960	1961	1962
No. D.A. districts participating —	14	19	23	20	20
No. of applicants —	30	146	200	315	271
Amount of seed supplied —	15,718	35,595	53,447	65,315	66,285
Acreage planted —	1,309	2,909	4,454	5,882	6,200

This project was used extensively by Field Supervisors in special weed problem areas with approval by the District Agriculturists.

WEEDS ON CROWN LAND

Soil sterilants, grass seed and 2, 4-D were again made available on a limited scale for weed control on Crown lands. A total of 336 lb. of soil sterilants and a supply of 2, 4-D and MCPA was distributed to Weed Inspectors under this policy.

ROADSIDE SEEDING AND SPRAYING

(a) Alberta Highways

This Branch continued the policy of seeding Government highways. The Highways Department purchased the seed stocks. The figures below show the mileage seeded, and the pounds of seed used on highways during the last five years.

	1958	1959	1960	1961	1962
Miles seeded —	650	380	600	433	502
Pounds seed used —	32,500	22,000	43,000	32,050	40,275
Pounds seed used on median strips and approaches —	—	—	—	6,800	14,645

The Department of Highways purchased a new Hydro seeder for use on "cuts" and "fills" and on median strips. Assistance was provided to help set up and calibrate the unit.

Favorable weather allowed for increased mileage to be seeded. The rate of seeding was 80 lb. per mile complete, (both sides). The basic mix of grass seed was Brome, Creeping Red Fescue and Crested Wheat for the drier areas with Alsike, White Dutch and Kentucky Blue Grass substituted for Crested Wheat in wetter areas.

(b) Municipal Roads

The Department continued the policy to provide suitable forage seed mixtures for seeding newly constructed back-sloped roads in areas where Service Boards are operative. Sufficient seed to plant four miles of road per division was the maximum allowable for this demonstration project.

The table below indicates the amount of seed supplied and the number of miles seeded. Municipalities purchased additional quantities of seed to meet their requirements. The table also shows the extent of mowing and spraying done by municipi-

palties through their Service Boards. Years 1955-1961 are included to indicate the trends in these projects.

Year	Lb. of Seed Supplied	No. Miles Seeded	No. Miles Mowed	No. Miles Sprayed
1955	30,408	1,041	7,500	6,500
1956	28,500	1,818	12,018	12,486
1957	32,785	1,624	11,817	14,890
1958	37,850	2,216	20,083	17,220
1959	51,800	1,883	23,011	17,837
1960	52,553	2,708	25,074	17,873
1961	53,525	2,282	24,893	19,979
1962	51,650	2,708	16,962	22,910

As a result of the assistance and demonstrations many municipalities have accepted back-sloping and seeding of roadsides as part of this road-building program.

ALBERTA ADVISORY WEED COMMITTEE

The fourth meeting of this Committee was held in December, 1962. The main topics under discussion were:

1. Weed research presently under way in Alberta.
2. Weed control recommendations for 1962.
3. Weed control activities (regulations, Noxious Weeds Act, tours, demonstrations, surveys) as carried out by the Provincial Government.
4. Reports by the Industry and Municipal representative.
5. New weed publications and revision of others.

The Committee approved for Alberta the weed control recommendations as established by the National Weed Committee (Western Section) at their meeting in Regina, in November.

AGRICULTURAL SERVICE BOARDS

There were two Agricultural Service Boards formed in 1962 with a total of 54 in Alberta. One new board includes the areas of I.D.'s 124, 125 and 126 with headquarters at High Prairie and the other Special Areas No.'s 2 and 3 with headquarters at Hanna.

Agricultural Service Boards placed 21 parcels of land under supervision, 164 parcels were held under supervision, and 21 parcels were released. There were 7 parcels of land placed under reclamation, 33 were continued from previous years and 6 parcels were released from reclamation.

Agricultural Service Boards held 190 Field Days, and 47 tours with most of them covering soils and/or weed control.

SERVICE BOARD AGREEMENTS

The Department of Agriculture continued to make available to municipalities where Service Boards are established, grants for agricultural projects to \$3,800.00 per district. In addition there were grants for (a) Brucellosis control program, (b) construction of municipal seed cleaning plants, (c) forage seed for back-sloped roads and (d) pest control sprayers,

MISCELLANEOUS

(1) One special weed meeting dealing with regulatory and extension in weed control was held at Peace River during the weed season.

(2) Weed chemical dealer schools were held at Camrose, Hay Lakes, Three Hills, Acme, Beiseker, Morrin and Sedgewick to provide dealers with basic information on weeds, kinds and rates of chemicals, sprayers, etc. A special one day agricultural chemical dealers school was held in Lacombe in late March organized in co-operation with Alberta representatives of the Canadian Agricultural Chemical Association. There were 103 in attendance which included chemical dealers, district agriculturists, field supervisors and other weed workers.

(3) The Supervisor and Assistant Supervisor attended 22 Agricultural Service Board meetings, made 77 field trips, 13 Service Board tours and spoke at 22 Agricultural Short Courses and other special meetings.

SOIL CONSERVATION

GENERAL

Moisture conditions during 1962 were quite variable; very dry in the south-east, somewhat average in the central and upper Peace River region and very wet in the north-east and Fort Vermilion area of the province. Heavy snowfall during January to March in north-central regions melted slow, and therefore water erosion damage was limited to some local areas. Rainfall during the summer caused considerable damage to rolling lands in north-eastern Alberta, (Athabasca - St. Paul). Much of this land was water-logged during the summer due to heavy rains.

Soil drifting again occurred in the southern Alberta region, however, the most extensive damage occurred during high wind storms in early May and late November. Farms on which the most severe damage occurs have usually been improperly handled with little consideration by the farmer of the dangers of soil drifting.

The 1962 Agricultural Service Board survey indicated that soil drifting was not as severe as in the previous year. Twenty-seven of 54 municipalities reported wind erosion damage on 2,084 parcels of land, and 38 municipalities reported water erosion damage on 1,765 parcels. Only damage which was of concern to farmers or agricultural officials was reported in this survey. District Agriculturists and Field Supervisors in co-operation with this Branch conducted 59 soil conservation demonstrations such as seeding eroded land, gully filling, fertilizer use, etc.

SOIL CONSERVATION ACT

The Soil Conservation Act, (Chapter 84, Statutes of Alberta, 1962) was passed at the 1962 session of the Legislature. The Act was established to encourage the adoption of proper soil

conservation practices and to prevent, in so far as possible, the loss of soil through negligence and misuse. The Act applies the same principle of ownership responsibility as does the Noxious Weeds Act and Pests Act. The Act is to be used to conserve soil prior to the necessity of applying more stringent regulations as contained in the Agricultural Service Board Act. The Act states in part that "every persons who owns, occupies or controls land shall take active measures to prevent soil deterioration upon the land by the action of wind or water or by any other cause." This division was active in providing municipalities with information on the administration of this new Act. The Act also provides for the passing of by-laws by a municipality to prohibit or control the removal of top soil and the burning of stubble. Soil conservation officers were appointed by most municipalities under the authority of the Act. This Act repealed the Soil Drifting Control Act of 1935.

SOIL FERTILITY

Fertilizer demonstrations were again conducted by twenty-seven Service Boards under supervision of this division. Fertilizer for these projects was supplied by grants through Service Boards and by the trade. There were approximately 300 grain samples thrashed for yield determinations. Results of these demonstrations were reported to District Agriculturists, co-operating farmers and the annual meeting of the Alberta Advisory Fertilizer Committee.

The use of commercial fertilizer continued to increase. The amount of fertilizers sold in Alberta during the last five years are shown below:

	1958	1959	1960	1961	1962
Tons	47,952	65,185	79,878	104,097	126,865

The use of fertilizer increased by 22% in 1962 over the previous year, or 59.6% in the last two years. Delayed seeding due to heavy spring rains in north-central Alberta prompted many farmers to use fertilizer.

SOIL CONSERVATION AND RECLAMATION

(1) Project I

This project was established to assist District Agriculturists and Agricultural Service Boards in promoting proper soil conservation practices and to reclaim land by the use of forage crops and fertilizers. Each municipality was limited to 15 applications. Applicants received assistance in the amount of one-half the cost of seed and fertilizer for 20 acres. The following table indicates the extent to which this project was used each year for the period 1958 to 1962.

	1958	1959	1960	1961	1962
No. of Demonstrations	41	186	256	264	307
No. of D.A. areas participating	17	23	28	27	25
Total amount of forage seed (lb.)	8,956	37,238	54,654	66,178	68,272
Total amount of fertilizer	—	2,000	5,880	22,680	4,400
Total acreage covered	—	—	—	6,316	6,800

There was a considerable increase in the number of demonstrations with a small increase in total forage seed. The amount of fertilizer distributed under the project has been reduced to 400 pounds per applicant.

(2) Save the Soil Campaign

"Save the Soil" campaign was carried on in the Edmonton area with about 35 farmers participating. Six certificates were received by farmers for their achievements in soil management at the Agricultural Short Course at Edmonton. This "Save the Soil" campaign is sponsored by the Edmonton and District Chamber of Commerce and the Alberta Department of Agriculture.

MISCELLANEOUS

(1) Seventeen radio talks and thirty press releases were prepared for the Radio and Information Branch on timely topics related to soils and weed control. Two television interviews were made on weeds and brush control.

(2) "Weed Control with Chemicals", Publication No. 83, was revised and 10,000 copies printed for distribution. Publication No. 144 "Chemical Control of Wild Oats" was revised with 5,000 copies printed.

(3) The Supervisor attended and took part in the National Weed Committee, Western Section, meetings in Regina and the North Central Weed Control Conference at St. Paul, Minnesota. The Assistant Supervisor participated in the National Soil Fertility Committee-Western Section meeting in Winnipeg.

(4) The personnel of this division acts as Secretary to the Alberta Advisory Weed Committee, Alberta Advisory Fertilizer Committee and the Land Utilization Committee.

(5) Five regional agricultural service board conferences were organized and attended to deal with regional problems relating mainly to soil and weeds. These were at Foremost, Two Hills, Barrhead, Lethbridge and Sedgewick.

CROP PROTECTION AND PEST CONTROL

CROP PESTS

Grasshoppers

The infested area in southern Alberta increased by 30% from 12 million acres in 1961 to 15.5 million acres in 1962. The intensity of the infestation also increased by 42% over 1961. There were 0.5 million acres classed as "very severe" with an additional 0.3 million rated as "severe". The accompanying map shows the area and relative intensities occurring in 1962. All 3 major pest species, the clear-winged, the two-striped and the migratory grasshopper were present in the infested areas south of the Bow River. North of the river, the clear-winged grasshopper was the predominant species.

Dry, cool spring weather prompted irregular hatching which began about May 10 and was prolonged beyond mid-June. Hatches which occurred early in this period were promptly controlled with insecticides as the damage caused to poor growth of grass in pastures and ditches was very apparent. Public meetings, notices, radio and T.V. announcements had also fore-

warned farmers to early control measures. Later hatches were less noticeable as increased plant growth offset damage being done by young 'hoppers. The increase in this food supply also slowed their migration into adjacent crops. Some crop damage occurred in the Drumheller-Hanna region but extensive chemical control measures minimized this loss.

Under the grasshopper policy, the Department distributed Dieldrin and Malathion insecticides at cost, less shipping and handling charges, through municipal and districts offices. Malathion was supplied as an alternative insecticide to Dieldrin for grasshopper control in pastures and hayland where Dieldrin residues are undesirable. Farmers buying Dieldrin were required to sign a declaration stating that it would not be used on animal feed crops.



The 1962 grasshopper policy, forecast and map were printed and distributed to municipal, district offices and other interested agencies. Grasshopper control information was distributed through Publication 139 "Chemical Control of Insect Pests—1962" which was revised to emphasize pesticide residues and to avoid their occurrence in meat and milk products. Six mimeograph letters on different aspects of grasshopper control were also circulated. The following table shows the 1962 situation with 1959-1961 data for comparison purposes:

	1959	1960	1961	1962
Acres Land Infested	4,150,000	6,800,000	12,000,000	15,500,000
Acres Crop Menaced	500,000	900,000	1,700,000	2,500,000
Acres Crop Destroyed	500	4,000	20,000	25,000
Lb. Tech. Dieldrin Used	10,750	10,140	63,690	63,750
Lb. Tech. Malathion Used	—	—	—	175,650
Acres Sprayed with Dieldrin	173,800	163,000	1,019,500	1,020,000
Acres Sprayed with Malathion	—	—	—	351,300

Four insecticides were field tested for effectiveness in a continuing effort to find effective substitute chemicals having no insecticide residue complications. The 1963 forecast, prepared by the Lethbridge Research Station, predicted a 25% increase in infested area. The "very severe" area that occurred around Drumheller in 1962, was forecast only as "severe" but with a greater area of infestation. The decrease in density was considered to be partly due to extensive control methods used in the current year.

Wheat Stem Sawfly

Low rainfall in the south-eastern portion of the province again favored an increase in sawfly population. Low acreages of sawfly-resistant wheat also contributed to the general increase. High populations present in native grasses moved into adjacent fields and damage to some fields was severe. However the majority of damage was moderate. Seeded acreage in 1962 for sawfly resistant Chinook and Rescue varieties was only 7.2% of the provincial wheat acreage, indicating the need for greater use of this control measure.

Cutworms

The Pale Western Cutworm was fairly numerous in 1962 and did some damage to crops in prairie regions. Some crops in the Lethbridge area were sprayed and reseeded but generally damage was not of economic importance. The 1963 forecast, prepared by the Lethbridge Research Station, indicated a further increase. The Forecast of increased prevalence of cutworms together with summerfallow control measures were distributed to municipal and district offices.

Red Backed Cutworm was of little importance with occurrence only in gardens and a few scattered fields in north-central Alberta. Predictions for 1963 from the Lethbridge Research Station were for continued scattered outbreaks in parkland areas. Army Cutworm damage was slight with spotty outbreaks occurring mainly along the southern border of the province.

Wireworms

Wireworm damage to field crops was slight and that which did occur was in scattered locations. Seed treated for wireworms by municipal seed cleaning plants increased to 780,500 bushels which was 7.9% of total seed cleaned. The 34% increase over last year's treatment indicated an increasing awareness of wireworm damage. This was partly the result of a promotion program carried on by seed plant managers.

Aphids

Scattered outbreaks of grain aphids occurred in the north-east-central region of the province and in the Peace River area. Large numbers clustered on developing grain heads, sucking the plant sap. Most damage occurred on late maturing barley and wheat, resulting in some kernel shrink. Some fields were sprayed with Malathion by aircraft.

Forage Insects

Alfalfa weevil populations present in the Milk River valley and the Lethbridge area were considerably lower than in 1961. Damage which occurred in alfalfa was slight and very little insecticide was used for control.

Sweet Clover Weevil damage remained at high levels in parkland areas. In some regions this forage crop is no longer grown due to weevil damage. Sprays of Dieldrin and Heptachlor, although effective, were unsuitable because of insecticide residue problems on animal feed. One field treated with Malathion and several previous trials of granular insecticides were appraised for weevil control but results remained questionable.

Vegetable and Special Crop Insects

Beet Webworm populations, in general, remained low throughout the province. Some damage occurred to rapeseed in the Red Deer area and required chemical control. Diamond Back Moth was quite numerous on mustard and rapeseed throughout the south and south-central sections of the province and the use of insecticides was necessary in some areas. In the Red Deer area Diamond Back Moth and Beet Webworm were both present in many of the rapeseed fields. Flea Beetles were fairly numerous and some damage to seedling rapeseed and mustard occurred, mainly along borders of fields.

The Sugar Beet Root Maggot inflicted severe damage on untreated beets, particularly in the Taber area. Sugar beets near Fincastle were severely damaged by a leaf beetle that occurred for the first time in the province.

Shelterbelt Insects

Forest Tent Caterpillar occurred in outbreak numbers in many districts of the parkland-wooded area. Defoliation of Aspen was common along, and north of, the North Saskatchewan River from Jasper to the Saskatchewan border. Aspen defoliation was

also very severe in the Peace River area. Aphids were particularly numerous on oramentals and shelterbelts throughout the province due to the cool and fairly moist conditions. Leaf beetles on poplar and willow caused considerable damage in the Edmonton-Ponoka region. Pear Slug infested cotoneaster, mountain ash and plum species in many locations. During 1962, 1 district obtained a sprayer under the Department 50% grant policy—M.D. of Minburn No. 72. There are now a total of 21 districts with spraying equipment for insect control. Approximately 270 shelterbelts were treated by County and Municipal sprayers.

Other Insect Pests

Stored grain insect pests have become less prevalent with the shorter storage time required before marketing grain. Where problems did develop safety equipment such as gas masks and filters were supplied for safe use of fumigation chemicals. Numerous requests for control information on stored grain pests in household foods were also handled. Enquiries on Silverfish, Larder Beetles, Red Clover Mite and other household insects were received and answered. Some 50 insect specimens were identified besides those handled by the Crop Clinic.

Bird Problems

Information on live trapping and other control methods was supplied for blackbird, starling, sparrow, pigeon and other bird problems. Attempts were made to establish more efficient methods for sparrow control around buildings. The Division co-operated in a survey by the Federal Research Branch, Winnipeg, on blackbird feeding habits and damage in the irrigation area.

CROP DISEASES

Diseases of Cereals

Smuts and Root Rots of cereals remained low, partly due to extensive seed treatment. Stem Rust of wheat was more prevalent but damage was confined to fields of susceptible varieties in the north-east. Powdery Mildew was widespread on various crops because of moist conditions and was found on wheat in central Alberta. There was a heavy incidence of Ergot in isolated fields of rye, durum wheat and even bread wheat and barley. Timely articles were released on seed treatment and disease control by crop-rotation and good management practises. Municipal seed cleaning plants treated 3,361,000 bushels or 37% of total seed cleaned compared to 2,804,000 bushels in 1961.

Diseases of Other Crops

White Rust of rape increased in prevalence, indicating the need for crop rotation. Also reports were more numerous on distorted flowering parts caused by the White Rust—Downy Mildew disease complex. Sclerotinia Rot on vegetables was unusually high. Damage and losses were high in shelter-belt plantings and ornamentals. Much of this was considered due to initial weakening of the plants by drought in 1961. Particularly severe damage occurred in hybrid poplars infected by

Septoria or Cytospora Canker of poplar. Fireblight of apples, mountain ash and related ornamentals continued high in most urban areas.

Disease of Potatoes

(a) General

The annual field disease survey began on August 27 with 10 inspectors employed. Delayed maturity, due to the cool, wet season, and frosted tops often masked symptoms and made disease detection difficult. Blackleg and Rhizoctonia were the most common of the serious diseases but generally were at a low incidence. Leaf Roll and Wilts were generally low but Common Scab was higher than usual in most districts. Early Blight occurred in moderate amounts and some fields in irrigated areas were sprayed with fungicide. Late Blight occurred in trace amounts only. On larger commercial fields especially, the use of certified seed, good sanitation and management showed in vigorous crops.

(b) Bacterial Ringrot

The control program was continued in established Pest Areas. Ringrot infected stocks were disposed of before planting time to reduce the use of infected commercial seed. Growers co-operated well in cleaning up and disinfecting storages. No official notices were served. Department high pressure sprayers working out of Edmonton and Lethbridge disinfected 40 cellars, plus machinery and equipment. Larger growers were encouraged to acquire sprayers for year-round disinfection. Certified seed lists were supplied to all commercial growers. Growers with ringrot in 1961 planted certified seed or seed grown on separate, approved seed plots. Three carloads of U.S. seed, found infected with ringrot, were diverted to table stock or processing use. Basic precautions proved effective in eliminating or preventing ringrot.

The following table shows the crop situation and survey results, with 1958-61 data for comparison purposes:

RESULTS OF THE RINGROT SURVEY BY PEST AREAS FOR 1958-62

Pest Area	Year	No. Farms	No. Farms	Acreage	Acreage	% Infected	
		Inspected	Infected	Inspected	Infected	Farms	Acreage
Lethbridge	1958	234	65	5,108	1,091	27.5	21.4
	1959	208	35	6,749	1,165	16.9	17.3
	1960	198	53	6,937	1,944	26.8	28.0
	1961	178	64	7,077	2,500	35.9	36.5
	1962	168	40	7,143	1,934	23.8	27.1
Calgary	1958	35	4	253	36	11.4	14.2
	1959	41	9	353	100	22.0	28.3
	1960	39	2	291	11	5.1	3.8
	1961	35	4	261	4	11.4	1.5
	1962	28	0	321	0	0.0	0.0
Brooks	1958	42	5	1,486	132	11.9	8.9
	1959	36	8	1,594	196	22.2	12.3
	1960	36	10	1,745	565	27.8	32.4
	1961	38	11	2,014	551	28.9	27.3
	1962	36	5	2,270	220	13.9	9.7
Edmonton	1958	153	26	2,370	363	17.0	15.3
	1959	148	25	2,956	507	16.9	17.1
	1960	126	16	3,123	264	12.7	8.4
	1961	124	27	3,114	973	21.8	31.2
	1962	110	6	3,387	430	5.5	12.7
TOTAL	1958	475	100	9,233	1,622	21.1	17.6
	1959	442	77	11,676	1,968	17.4	16.8
	1960	408	81	12,138	2,784	19.8	22.9
	1961	370	106	12,466	4,118	28.6	33.0
	1962	342	51	13,121	2,534	14.9	19.7

A total of 13,121 acres on 342 farms were inspected. The Canada Department of Agriculture co-operated in certified seed field survey and diagnostic service for the Lethbridge district. Diagnosis for specimens from the Edmonton, Calgary and Brooks districts was done for the first time by the Field Crops Clinic. Fewer infected farms were found in all areas with a decrease in the total number to 51 from the 106 of 1961. In practically all cases, only trace infection was found. The total amount of disease remained at a low level with little loss in yield, storage or sales, for producers or the trade. All growers with ringrot infection were contacted by registered mail and by personal interview to advise and assist with orderly crop disposal and control measures. A new mimeograph on Bacterial Ringrot was prepared and distributed to all commercial growers, along with various publications and disease charts.

LIVESTOCK PESTS

Cattle Grubs and Lice

Testing and promotion was continued with new livestock systemic insecticides. Data compiled from field tests of 1958-61 was supplied. Almost all districts have now been assisted with cattle spraying demonstrations. During 1962 the formation of cattle spraying associations was emphasized to promote larger area control with co-operative equipment. There are now a total of 47 associations in Alberta. The Municipal Districts of Stony Plain and Lac Ste. Anne have 17 and 13 spraying associations respectively to provide a spraying service for almost all farms. Most Agricultural Service Boards provided sprayers for demonstration or service spraying. Some 130 demonstrations were held and 627 herds with 49,000 cattle were sprayed for warbles and lice.

The Forestburg Warble Test Project successfully completed its third and final year. During the 3 years, a total of 18,000 cattle were sprayed on about 200 farms to get practically complete coverage of all livestock in the test area. The 1962 spring survey showed that the 2 systemic insecticide sprays, Co-Ral and Rue-lene, reduced the grub count from the original 14 per head to zero. Complete extermination of warbles was effected in the central zone which was surrounded by a 5 mile buffer zone of treated cattle. Louse control was effective for 4 to 5 months overwinter. Considerable information was gained on organization and control methods for use in larger area control in other districts. Spring checks were made on 6 field tests in various districts to get further data, especially for "pour-on" results as compared to sprays. During the year a further 4 field trials were conducted for information on control of grubs, lice, flies and mosquitoes. Publication 157 "Control of Livestock Insects" was prepared, printed and distributed. Several timely articles were prepared for the farm press and district offices. The Supervisor served as chairman of the Western Regional Committee on Recommendations for Pesticides on Livestock.

Magpie Control

Few reports of magpie damage to livestock were received. Control demonstrations were set up in 10 districts to train new municipal officials who then could assist with individual and local programs. The Division co-operated with municipal officers, the Fish and Wildlife Division and local Fish and Game Associations in district campaigns in the Warner, Lethbridge, Medicine Hat, Brooks, Stony Plain and High Prairie areas. Recommendations as set out in Publication 120 "Magpie Control in Alberta" were supplied to assist with farm problems. A special questionnaire survey was conducted in all districts at the end of March. The consensus of opinion indicated that the control program was providing relief where needed. Agricultural Service Boards reported that 382 recorded poison sets were used and an estimated 13,800 magpies were killed.

Coyote Control

During the fall coyote damage increased in almost all areas as rabbits and other wildlife food supplies declined. The control program was accelerated in most districts. The following approved poisons were supplied free of charge to 87 approved districts which cover all settled areas of the province: cyanide guns (coyote getters), strychnine and sodium fluoroacetate (compound 1080). Since 1951 when the Department undertook the control of coyotes in agricultural areas, a total of 42,490 coyote getters, 116,340 cyanide cartridges and 979,500 strychnine pellets were distributed to farmers by provincial and municipal pest control officers. For farm use, the easier-to-apply strychnine was preferred over coyote getters. The latter have been recalled wherever not actively used, in the interest of animal and public safety.

The following table shows the amounts of major coyote control material supplied by this Division and estimated coyote kills by the 3 poisons used, with 1958-61 figures for comparison purposes.

	Coyote Getters	Cyanide Cartridges	Scent (2-oz. Jars)	Strychnine (Pellets)	Estimated Coyotes Killed
1958	400	1,230	1,340	58,500	34,900
1959	240	820	1,330	66,000	32,700
1960	110	1,170	1,150	59,000	28,300
1961	720	1,120	910	39,000	26,600
1962	230	1,780	1,050	53,000	28,800
Totals	1,700	6,120	5,780	275,500	151,300

Coyote control was continued in areas outskirting settlement. Four provincial pest control officers were fully employed during the winter in Improvement Districts without Agricultural Service Boards. During the summer, 7 provincial weed inspectors handled coyote control along with regular duties.

The poison 1080 was set in sparsely settled areas to help individual farmers using other control measures on their own land. Under a co-operative program with approved municipalities, the following 1080 baits were prepared and set during the winter season:

District	No. Baits Set	District	No. Baits Set
Athabasca, County No. 12	10	Sturgeon, County No. 15	1
Barrhead, County No. 11	8	S. Paul, County No. 19	13
Beaver, County No. 9	11	Taber, M.D. No. 14	10
Bonnyville, M.D. No. 87	9	Thorhild, County No. 7	15
Cardston, M.D. No. 8	28	Vermilion River, M.D. No. 71	24
Flagstaff, M.D. No. 62	13	Vulcan, County No. 2	12
Foothills, M.D. No. 31	12	Wainwright, M.D. No. 61	12
Grande Prairie, County No. 1	6	Warner, County No. 5	7
Kneehill, M.D. No. 48	17	Westlock, M.D. No. 92	3
Lacombe, County No. 14	13	Wetaskiwin, County No. 10	13
Lac Ste. Anne, M.D. No. 93	9	Willow Creek, M.D. No. 26	5
Leduc, M.D. No. 75	14	Special Areas, No. 2 and 3	25
Minburn, M.D. No. 72	12	I.D. No. 11	43
Mountain View, County No. 17	15	I.D. No. 22	7
Newell, County No. 4	15	I.D. Nos. 27, 946 and 50	13
Paintearth, County No. 18	12	I.D. Nos. 58, 65, 68 and 69	36
Pincher Creek, M.D. No. 8	11	I.D. Nos. 85 and 101	8
Ponoka, County No. 3	12	I.D. No. 102	13
Provost, M.D. No. 52	12	I.D. Nos. 107, 109 and 122	11
Red Deer, M.D. No. 55	24	I.D. Nos. 124, 125 and 126	4
Smoky River, M.D. No. 130	9	I.D. No. 131	1
Starland, M.D. No. 47	13	I.D. No. 132	4
Stettler, County No. 6	12	Army Range (Ralston)	4
Stony Plain, M.D. No. 84	10		
Strathcona, County No. 20	2	Total Baits 1962	573

A total of 80 districts, including Counties, Municipal Districts, Special Areas, Improvement Districts, Indian Reserves, etc. are now approved as areas where 1080 may be set. Six new districts were approved by Ministerial Order during 1962. The following table shows the 1080 program for the last 5 years:

	1958	1959	1960	1961	1962
Number of Sets	749	632	529	605	573
Number of Districts Using	50	55	54	53	59
Number of Districts Approved	63	72	73	74	80

The Supervisor, his Assistant and 3 Fieldmen, working out of Edmonton and Lethbridge, serviced 59 districts using 573 baits during 1962.

RODENT CONTROL

Pocket Gopher

Numerous requests were received for control of the pocket gopher in forage crop fields, gardens and shelterbelts. Publication 124 "Pocket Gophers" was used to supply control recommendations for small infestations in urban and rural areas. For larger infestations, testing and demonstrating was continued with the Department "burrow builder machine". Assistance was given to several districts and individuals in the construction of "burrow builders". Nine districts now have machines available for use on a community basis. Although the pocket gopher population remained high in most areas, there was a significant decrease in the foothills areas of Rocky Mountain House and High River, apparently due to natural causes.

Other Field Rodents

Rabbits continued to damage ornamentals, fruit trees and shelterbelts but the population decreased significantly, in most areas, during the year. Information on the use of successful repellents was distributed in mimeograph form. Prepared circulars were also distributed for the control of the Columbian (mountain gopher) and Richardson's (prairie gopher) ground squirrels.

Norway Rats

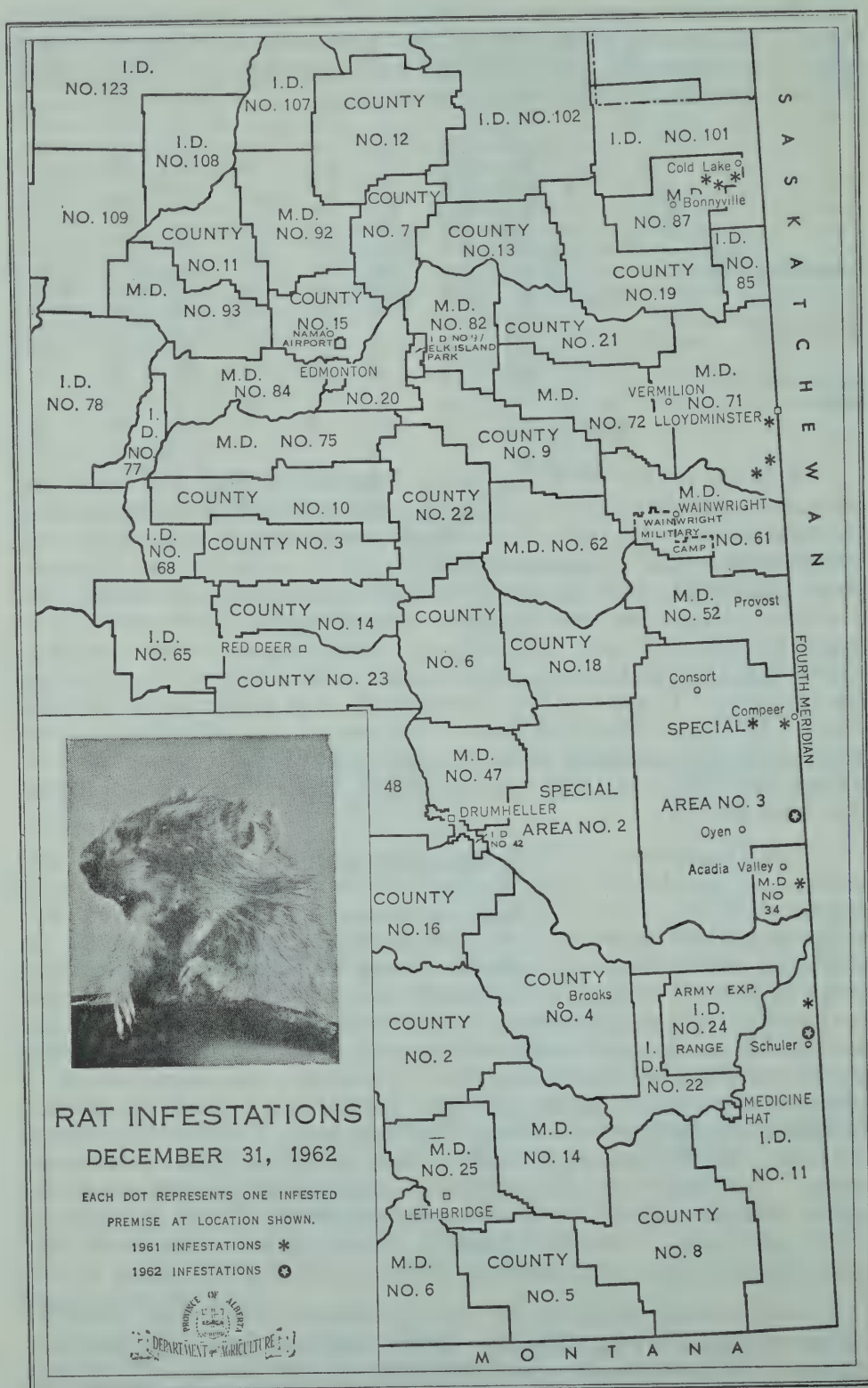
The control program was continued in all parts of the province with special emphasis on the east border. The following table indicates the rat situation on December 31, 1962, with 1960-61 results for comparison purposes:

	Year	Verm. River M.D. No. 71	Wainwright M.D. No. 61	Provost M.D. No. 52	Sp. Areas No. 2 and 3	Acadia M.D. No. 34	I.D. No. 11	I.D.'s 85 and 101	Totals
Premises Checked	1960	1,317	366	568	564	176	431	330	3,752
	1961	817	366	568	566	182	467	265	3,221
	1962	1,071	300	568	556	177	482	242	3,396
No. Infestations									
Exterminated	1960	60	11	11	40	12	12	11	154
	1961	36	8	7	35	13	13	24	136
	1962	33	6	4	12	8	5	21	83
No. Infestations									
Remaining Dec. 31	1960	7	0	0	11	3	1	3	17
	1961	3	0	0	1	1	1	3	10
	1962	0	0	0	1	0	1	0	2

A total of 85 premises were infested during the year as compared to 146 in 1961. All but 2 infestations were exterminated by the end of the year and these were being systematically eliminated. The invasions from the east was the smallest in years, showing the results of steady, concerted action in all districts along the east border. Considerable assistance was given to Saskatchewan authorities in initiating a control program along the Alberta border. This action further helped to decrease the invasion. Co-operation of the public was generally excellent. Only 2 Notices to Control Pests were issued and effective control measures were realized without court action. Rats were held all along the 380 mile front and confined to a narrow strip along the east border.

The Department's 50% grant toward the salaries and expenses of municipal pest control officers was continued in 6 border districts. Two full time provincial officers worked closely with municipal men and residents and supervised control in northern Improvement Districts. Some 250 pest control officers were appointed by rural municipalities, cities, towns and villages to handle local infestations. Outside the east border area, 77 suspected rat cases were investigated. In the border control area, emphasis was continued on preventive measures such as improvement of garbage disposal grounds, portable granaries blocked off the ground, etc. Warfarin and Pival poison baits were widely distributed, free of charge, to residents in the infested area. The following quantities of bait were used during the year: Ready Mixed—16,650 pounds and Water Soluble—3,270 packages. Estimates based on average rat infestations and amounts of poison used indicate that over 25,000 rats were killed.

Educational rat displays and demonstrations were used at summer fairs, T.V. radio and other media. Rat control films, colored slide series, live and mounted rat specimens and control materials were used and supplied for various meetings in Alberta and Saskatchewan. Newly appointed pest control officers were supplied with control kits, posters and publications. Field trials were conducted with new poison formulations. Several timely articles were prepared for the press and Department publications.



PEST CONTROL COMMITTEES

The 6th annual meeting of the Pest Control Advisory Committee was held in December, with the Supervisor serving as secretary. The Predator and Wildlife Sub-Committee also met in December. The organization meetings of the National Committee on Pesticide Use in Agriculture and the Prairie Regional section were attended by the Supervisor in March and November respectively. Various problems of mutual concern were dealt with by the above committees on a provincial, regional and national basis.

MISCELLANEOUS

The Supervisor and his Assistant spoke at 33 meetings, short courses and field days. Eight Agricultural Service Board and Municipal District Council meetings were attended on various pest control programs. Twenty-eight conferences and committee meetings were attended. Sixteen articles were prepared for Farm Notes, 3 for the farm press and 12 radio and T.V. interviews were made. There were 355 field investigations made on various problems.

HORTICULTURE

HORTICULTURE SERVICES

Alberta farmers planted 1,702,331 trees from the Provincial Nurseries at Brooks and Oliver. This is a decrease over 1961 of 438,069. The number of farmers receiving trees was 3,665 an increase of 290 over the previous year. 2,164 applicants planted farmstead shelterbelts, 748 field windbreaks, 177 roadside plantings and 321 ordered replacement trees to fill in gaps and complete existing plantings.

Except for the south-east portion of the Province the weather was ideal and losses were low. The trees made good growth and went in to the winter in mature condition.

TREE NURSERY — OLIVER

1,383,313 trees were supplied to 3,410 farmers from the Oliver Nursery. This is a decrease of 210,367 trees but an increase of 307 applicants over 1961. For the first time the Nursery was able to fill all requests for evergreen trees. 300,466 of these long lived trees were supplied to Alberta farmers.

An inventory of trees on the Nursery at the end of 1962 included 3,087,430 seedling stock for the Department of Agriculture, 2,307,372 evergreen seedlings for the Department of Lands and Forests, 3,411,945 transplanted stock, 13,324 for Provincial Parks, 1,525 soft wood cuttings for Provincial Parks 1,319 seedling evergreens planted in plastic shells and 1,734,439 for 1963 distribution. In addition to these 10,557,354 trees the Nursery staff made 667,880 hardwood cuttings of several varieties of poplar and willow.

Seed of the following varieties was collected, extracted and cleaned: Villosa Lilac 100 lb., Mountain Ash 10 lb., Colorado Spruce 25 lb., White Spruce 13 lb. The program for the Depart-

ment of Lands and Forests was continued. 1,000 pounds of Spruce seed was extracted from cones sent into the Nursery from the different forest divisions of the Province. This seed has a value of more than \$10,000.00.

A new 140 International Row Crop Tractor was added to the Nursery inventory. A new 1-ton replacement truck was obtained. The Nursery staff constructed two trailers. These were equipped with a misting device. They were used to move the evergreen trees from the field to packing shed. A lath house was constructed over the receiving end of the packing shed. These additions insured the evergreen trees reached the farmer in top condition. A second bundle tyer was purchased.

Germination tests were made on spruce and pine seed for the Department of Lands and Forests.

There was no serious outbreak of insects or disease on the Nursery. The Nursery was sprayed twice to control minor insect outbreaks.

Chemicals were used to help control the weeds on the Nursery, thus reducing hand weeding to a minimum.

One mile of Russian poplar and quarter miles of Manitoba maple, green ash and China willow were planted for wind-breaks on the new piece of land. Sixty acres were heavily manured and the rough areas levelled. Twenty acres of the new area were seeded to caragana, maple and green ash.

250,000 trees were supplied to other Government Institutions for research and beautification purposes. The following Provincial Institutions received trees; Belmont Rehabilitation Centre, Vermilion and Olds Schools of Agriculture, Brooks Horticultural Station and the University at Calgary. Federal Stations receiving trees were: Department of National Defence, Edmonton, R.C.A.F. Station, Penhold, Magnetic Observatory, Athabasca, Experimental Farms at Fort Vermilion, Manyberries and Indian Head, Saskatchewan. 2-0 Colorado spruce were supplied to the cities of Calgary and Edmonton and the town of Lacombe to assist their Arbor Day programs.

The Nursery employs a staff of 4 permanent men. Forty-nine extra men were employed during the shipping season. In the summer 9 extra men are hired. No patients from the Oliver Hospital were employed this year.

TUBER INDEXING OF FOUNDATION SEED

The service of indexing foundation potatoes was continued by the Field Crops Branch, Horticultural Station, Brooks, and the Canada Department of Agriculture. 1,899 tubers were prepared and grown in the greenhouse at the Provincial Horticultural Station, Brooks, and disease readings taken on March 19 and 20. Sprouting was uneven, as was plant growth and virus infection was above average. 79.3% of the tubers were returned to the growers as qualified for production of foundation seed. 14.7% showed mosaic. 1.4% showed spindle tuber. 1.5% were weak and 3.1% were discarded for a variety of other diseases. The

varieties tested were Irish Cobbler, Netted Gem, Pontiac, Warba, Early Gem and Red Bliss.

POTATO PRODUCTION IMPROVEMENT COMMITTEE

This Committee appointed by the Horticultural Advisory Committee is composed of Potato Growers from all producing areas of the province and Government personnel interested in potato production. It has the responsibility of assisting and advising the potato industry in the province and acting in an advisory capacity to the Horticultural Advisory Committee. Two meetings were held in 1962, the annual meeting in Calgary in February and the second in conjunction with a Field Day held in Edmonton in late June.

SEED POTATO PRODUCTION

The following table is an 8-year summary relative to seed production in Alberta.

	1955	1956	1957	1958	1959	1960	1961	1962
No. of Growers	67	72	65	61	68	62	57	51
No. of Fields Inspected	228	220	222	203	266	253	249	190
Acres Inspected for Cert.	1,004	1,328	1,577	1,615	2,070	1,847	2,176	1,617
No. of Fields Rec. Cert.	214	186	188	172	236	223	158	179
Acres passed for Cert.	965	129	272	1,300	1,716	1,547	1,442	1,415

HORTICULTURAL ADVISORY COMMITTEE

This Committee is composed of representatives of the Field Crops Branch, University of Alberta, Research Stations of the Canada Department of Agriculture and representatives of commercial and amateur horticultural industry in the Province. The Committee is responsible to and reports to the Crop Production Board.

NURSERY INSPECTION

In co-operation with personnel of the Plant Protection Service of the Canada Department of Agriculture, the Supervisor of Horticulture inspected 17 commercial nurseries. The inspection was carried out to check the nurseries for disease and insects, with particular attention paid to imported stock. As a result of this inspection the Department in co-operation with the other Prairie Provinces publishes a list of commercial nurseries.

ALBERTA HORTICULTURAL ASSOCIATION

The Association held its 10th annual meeting at Calgary in March. The 8th annual Provincial Horticultural Show was held in Lethbridge in August in conjunction with their annual Bench Show. The Executive met twice during the year. The Association published for the first time three issues of its official magazine the Alberta Horticulturist.

OTHER ACTIVITIES

The Supervisor of Horticulture addressed 11 public meetings. In addition he spent time in 25 District Agriculturists' areas assisting with tree planting, Farmstead Planning and beautification and other horticultural matters. He assisted at 5 4-H Garden, Grain and Potato Club Achievement Days. He also attended a 4-H Leaders' Conference and served as judge at the 4-H elimina-

tion contests held in Olds. He attended 7 monthly meetings and 4 Executive meetings of the Edmonton and District Planning Commission. Seventeen visits were made to the University to discuss matters of mutual interest and concern. Three radio talks were given on the Department's daily program "Call of the Land" and 2 T.V. appearances on C.B.X.T. Fourteen press releases were published in the Department's weekly newsletter "Farm Notes". Fifty-two trips were made to the Oliver Tree Nursery and 3 trips to southern Alberta and one to the Peace River to attend meetings and Field Days regarding special crops of these areas. He is a member of the Alberta Horticultural Association and attended the annual meeting, the Provincial Horticultural Show and two Executive meetings held by this organization. He represented the Branch at the Royal Winter Fair, Toronto.

HORTICULTURAL STATION, BROOKS

Long oriented to serve the farm home owner in garden and grounds, the Provincial Horticultural Station has been required to serve also the young commercial vegetable industry. To that end 27 calls were made to vegetable growers and companies having interests in the vegetable field. A formal meeting and other consultations were held with personnel of Canada Research Station at Lethbridge. There were also 24 farm visits to help with special landscape and horticultural problems and to check orchards. Landscape plans were provided for 9 farms, 3 public buildings, 19 residences, and 1 park. Station staff attended 43 meetings the past year—including Horticultural Shows, Garden Clubs, and Horticultural Societies.

The Station was host to a number of visiting groups, a function facilitated by completion of the Picnic Shelter. These included Public and High School classes from various locations, Horticultural Society Groups from Lacombe and Stettler, Calgary Garden Clubs, the Rolling Hills United Farm Women of Alberta and 4-H Clubs. The first of a series of E.I.D. Field Days was held to acquaint area farmers with the services of the Station. This season residents from Duchess, Rosemary, and Millicent districts were invited. The annual Vegetable Field Day received co-operation from the trade. Attendance exceeded 180.

Over 2,100 personal calls were made to the Station for discussion and advice on horticultural problems. Visitors were from all parts of Alberta, other provinces, the United States of America, Germany, Belgium, Finland, Ghana, West Africa, Ceylon and India.

Improvement in office equipment facilitated handling 3,432 letters by the clerical staff. Three newsletters were issued, covering seasonal activities and programs. Items from these letters were widely used in press and radio. Three visits were made by CBC-TV personnel to obtain program material. An article on "Specialty Crops in Alberta" was written for the Agricultural Institute Review. A manuscript "Progeny Test of Apple Varieties for Hardiness and Vigor" was prepared.

BUILDING, MACHINERY AND MAINTENANCE

Station machinery was maintained in good repair and several machines required in the commercial vegetable project were built or modified. Items built or purchased were: Carrot washer, cooler, and grader; four "over and under" scales, a grading and packaging assembly line. Some of this equipment and the bed shaper and seeding assembly were loaned to growers. A portable granary was converted for ice storage, filled early in the year, and provided ice for cooling the carrots at harvest. Additional cold room and cellar storage was built.

The John Deere "530" tractor was traded in on a new I.H.C. crawler tractor and a Western Ditchmaster was purchased. A chemical applicator and a new lawn mower were acquired, and the '59 Chevrolet half-ton exchanged on a '63 Dodge half-ton truck.

In the water supply system an additional filter has been added. A standby pump was also acquired in case of an emergency.

In the test kitchen a deep fryer was purchased to implement the potato chipping tests, and the old refrigerator was replaced.

Few plumbing repairs were needed, but the refrigerator room units required considerable high cost maintenance work.

The major building enterprise involved completion of the picnic shelter, containing a service kitchen with equipment, a camp stove, and portable tables. A comfort station with its own septic field has been provided. Roadways about the office were changed and a large gravelled parking area, sewer drained and provided with curbs and sidewalks, was installed to service the site. Six street lights standards were erected. Improvements were made to the service road and parking area at the rear of the building.

WEATHER

Low temperatures with little snow prevailed during January and February. The extreme low was -31°F on February 28th. A small percentage of winter killing occurred in the tree fruits, 30% in strawberries and severe kill back occurred in raspberries. Late spring frosts destroyed 90% of the apricot blossoms and damaged early vegetables.

The growing season, abnormally cool well into summer, covered 152 days, between May 8th and October 6th. The frost-free period of 116 days was between May 8th and September 3rd. The extreme high temperature was 92°F on June 25th. Rainfall was 8.32 inches, close to the long time average. Following the early September frost, which did damage to vegetable crops, the fall remained open and mild into late December.

PROPAGATION

Germination and growth of tree and shrub seed was excellent in the lath houses. Sixty different varieties and species were propagated, 85% of the seed for these was grown on the

Station or collected locally. Of the 350,000 cuttings made, loss in storage was high due to heating. However, a 65% survival rate on planting was much higher than formerly. In all, about 850,000 shrubs and trees were produced for distribution, of which 28,000 poplar were fall shipped to the Oliver nursery.

The stratification work, routine with most species, was improved in Hawthorne. Following H_2SO_4 treatment for $1\frac{1}{2}$ hours the seed was subjected to weekly alternations of storage temperatures of $38^\circ F$ and $70^\circ F$, and washed in cold water between each change. Germination of 95% was obtained and vigorous growth ensued (6 inches to August 3rd). The check, following H_2SO_4 treatment, was stored at $38^\circ F$ and produced no germination. Stratification of both lots began early in January and the seed was planted on April 16th.

A low percentage of survival in early spring transplants was general, due to lack of moisture at that period.

The cellar plywood bins built in the fall of 1961 for storage of trees and shrubs for early spring distribution gave good results. Roots were covered with peat moss and watered at time of storage. During the storage period, from October to early April, they were watered once or twice weekly. Cellar temperature was maintained between 30° and $38^\circ F$. A better than 90% survival was obtained in all except four species. May Day and Apricot, placed against a concrete wall, suffered losses from dessication. Low survival in Sandcherry was attributed to digging during freezing weather. Elder had not reached dormancy when stored and heating of leaves and stems was not noted in time to prevent loss.

The long open fall facilitated digging and storing material for spring distribution in 1963.

HERBICIDE TRIALS

Screening trials of numerous herbicides available were continued in 1962. An attempt was made to compare liquid and granular pre-emergent applications for degree of weed control and crop tolerance. Crops tested were beans, peas, onions, carrots, parsnips, table beets, lettuce, radish, potatoes, pumpkin, cucumbers, lentils, corn and turnips. Transplants of celery, peppers, tomatoes and cabbages, as well as gladiolus, were also included. Nine granulars and fifteen liquid herbicides were involved.

A check was made on residual action of four herbicides applied in 1961.

Trials with various herbicides were conducted in orchards, shelterbelts and ornamentals. Information obtained in 1961 was applied for control of weeds in vegetable fields.

Additional data was obtained and considerable savings in labour and machine use was made possible in overall control of weeds.

FARM CROPS

Good crops of alfalfa and oat green feed were obtained. The fall rye crop on Plot 2C was very patchy due to excessive

alkaline conditions. Upon its removal this area was put down to tall wheatgrass. Highly alkali resistant, this grass should, over a period of years, improve the area to a point where it may be used for other purposes.

In a study and demonstration of fresh vegetable production as field crops, onions, lettuce, cabbage, carrots, parsnips, sweet corn, and tomatoes were grown on a small acreage. Most operations were mechanized and weeds were controlled with appropriate herbicides. Irrigation difficulties in "raised bed" and "between-row corrugation" applications pointed up the need for sowing such crops on contour or on land with very little slope. In spite of this, good growth and excellent yields were obtained. Onions produced 10 tons per acre, harvested well and were placed in a "storability" test. Lettuce yielded 120 cases from one-third acre, was cooled, packed, and marketed directly from the field. Two-thirds of an acre of carrots produced 17 tons. Trial shipments of carrots were begun as soon as marketable size was reached, and are being continued from storage. The same procedure was followed with a few pilot rows of parsnips and cabbages. Sample yields were taken from the tomatoes and sweet corn, and some small quantities were marketed. Total saleable yield could not be obtained for these crops because adequate packaging and marketing supplies were not made available in time. The test marketings made emphasized the need for prompt removal of field heat with adequate cooling equipment, and attractive packaging in standard containers.

VEGETABLES

Varietal Trials — For evaluation to form a basis of recommendations in the "Horticultural Guide", five hundred and ninety varieties of 41 kinds of vegetables were grown in 30-foot rows. Yields were taken, with other data, and they were sampled for quality rating in freezing and household use. An unusually cool season saw night chilling inhibit the fruit set on all varieties of eggplant and on all except the Castle variety of peppers.

Cabbage Breeding — This project, started in 1950, reached the stage where only six lines developed from inbred strains of "Evergreen" cabbage are retained. Selections made in 1961 were bulked within lines for increase.

Tomato Breeding — Ability to set fruit on the early trusses, when conditions are usually cool, is a "must" in any variety bred for Alberta. Segregation populations in this project encountered an ideal season this year to show up those plants carrying the "cool-set" factor. As a result fewer selections were made. Forty-eight F_2 to F_3 plants were selected from the 9,512 which were grown in 1961 from one hundred and fifty-seven field selections. The 3,937 F_3 plants from sixty-three 1961 field selections produced 19 outstanding plants.

Five types showed promise and have been used to develop new varieties for canning. The first of 81 crosses grown in the greenhouse gave 768 F_1 plants. Transferred to the field, 90 promising plants were obtained.

Tobacco Trials — Data were taken from a vigorous, disease-free replicated stand of five varieties of flue-cured type tobacco. Four of these varieties were obtained from Delhi, Ontario and one from Harrow, Ontario.

POTATOES

The extensive potato program was continued, with nine varieties in the Prairie Regional Trial and 123 varieties and seedlings in the National Adaptational Trial. The Brooks Regional Trial covered five varieties, the Brooks Adaptational Trial 23 varieties and seedlings; in addition to the Early Tuberizing Trial which features a search for varieties which set and produce marketable tubers early in their growth.

In the potato breeding program, 8,309 seedlings from 1961 were field planted and 275 selections made to go into the annual reselection program. From the controlled cross potato seed, greenhouse grown, 7,422 seedlings were harvested to begin the selection process next year.

As a service in maintaining disease free seed stock the Tuber Indexing Program tested 4,161 tubers, over 58% being Station stock. Central and northern growers did not participate. A refinement was added to the test, microscopic examination, particularly for bacterial ringrot, was undertaken by the Division of Plant Pathology of the Canada Department of Agriculture Research Station, Lethbridge.

PROCESSING

Considerable time and effort was devoted to assessing quality in potatoes, vegetables and fruits under trial. During January, after 6 months in frozen storage, 183 varieties of vegetables were cooked and subjected to taste panel appraisal. Varieties of raspberries, strawberries, and rhubarb passed through similar tests. During this growing season 195 vegetables were sampled and frozen for subsequent tests. Promising small fruit selections were also sampled for comparison with standard varieties.

Quality appraisal of potato varieties and seedlings involves boiling, baking, chipping and French frying and scoring by taste and visual examination.

Testing of papers for wrapping and packaging household meats for freezing was continued.

TREE FRUIT

The varietal trial orchard, following the planting of 109 trees, is now comprised of 1,074 specimens. These were checked for identity during blossom stage and re-labelled. A second test orchard has been started as part of the Prairie Co-operative Fruit Breeding project. All of the Brooks selections will be part of this orchard by the spring of 1964 and will undergo their final evaluation.

All apple and crabapple orchards were sprayed three times with Agristrep, starting at the 10% blossom stage. These treatments successfully checked incidence of "Fire Blight".

In the past season 47 apple selections were made. One of these (M329 x Patricia) is 2¼" in diameter, red in color, ripe in late August, and is a fair keeper. On August 28th, 43 apple selections were placed in cool storage. Of these, nine were discarded by November 30th on the basis of poor keeping quality.

No apricot selections were possible due to blossom damage by late frosts. The Dr. Patterson pears, recently released, were planted.

Twelve promising selections were made of Mongolian cherries; (*Prunus fruticosa*) and two of Nanking cherries (*Prunus tomentosa*). All will be propagated further.

Over 9,000 fruit trees were budded this season, of which 2,500 were apricots, 3,800 were plums, and 3,100 were apples and crabapples. Approximately 3,000 one-year old fruit tree whips will be available for distribution to farm orchards in 1963. The "Rootstock and layering" plot has been doubled to approximately 300 trees.

SMALL FRUITS

Raspberries suffered a high degree of kill-back and winter-kill. Many fall planted new varieties and seedlings were lost. Yields, however, were fair from the surviving material. Forty-five named or numbered varieties are being propagated and 365 trailing raspberry seedlings were put out for selection.

Eighty percent of the 1961 strawberry selections planted in raised beds winter killed. Thirty new strawberry seedling selections were made, all with excellent vigor and yield. Crosses were made in 15 combinations of varieties, seeking quality and hardiness. Started in the greenhouse, 2,643 new seedlings were ready for 1963 spring planting. In the varietal trials, British Sovereign proved the hardiest, most vigorous and highest in both yield and quality of berries. All varieties were sampled for freezing.

Data were obtained from the Ribes trial plot, which was expanded by 24 rows with 116 new currant and gooseberry plants grown from cuttings. A further plot of six hundred seedling gooseberries was planted and developed well.

The rhubarb seedling block did very well, and will be ready for selection in 1963.

GREENHOUSE

Greenhouse facilities, following early-in-the-year use for tuber indexing, were taxed to capacity to start some sixty thousand vegetable transplants and a similar number of annual bedding plants and perennial ornamentals. Permanent cold frames had to be supplemented with temporary structures to aid in this task. Other projects occupied the greenhouse benches during the remainder of the year. This season, parent plants of tomato, potato and strawberry varieties were housed to facilitate breeding programs. Later, the crossed seed produced was grown for transfer to field culture. When available, space was employed in the propagating of Juniper cuttings and other hard and soft-wood cuttings.

ORNAMENTALS

In the woody ornamental block, fifteen new trees and shrubs were introduced and replacements made to bring specimen groups up to three in number. A start was made to expand the hardy shrub-rose planting. The severe winter resulted in a 25% loss in house garden roses, notably the "teas". This made necessary replanting and reorganization into groups, namely "Floribundas", "Polyanthas", "Teas", and "Climbers". Replacements were obtained from seven sources readily available to householders, and a study of root-stock was started to check the Morden finding that roses survived better on canina stocks. Also, in this study, it was noted that "waxed" stocks failed to establish well.

The tulip collection survived well under a light straw mulch and gave a profuse of spring color. Interplanted with petunias, a continuous summer show was obtained in the same area. Some tulip species groups were added this fall.

In peonies, the new named varieties did well. The hybrid plantation received its final selection and the peony block was moved to a new location to ready the old site for levelling operations. The lily collection showed no loss, performed well, and received additions of the Olympia and Fiesta hybrids.

Other herbaceous perennials survived well with the exception of Morden Lytherum which showed an 80% mortality. The hardy chrysanthemums put on an excellent show, after the first frost, as did the fall asters. This season the Lethbridge "Indian Name" collection and some new Beltsville varieties were added. Eight selections were made from hybrid material. During the long open fall some larger mums, hybrids of the hardy type and glasshouse mums, bloomed with very little protection.

Almost half an acre of gladiolus again made an eyecatching display from late July to late September. The thousand named varieties were planted in size and color groups for ease on observation and study. About 2,500 seedlings were grown for selection next year, while in the named group some 17,500 blooming size corms were planted. Herbicide trials were continued and a small disease control project undertaken.

REPORT OF THE APICULTURE SECTION

The 1962 honey production in Alberta was down 1.6 million pounds from the record 1961 honey crop. Seven million pounds was produced in 1962. Production per colony was down 52 pounds. There was an increase of 5,400 colonies of bees and a decrease of 130 beekeepers.

The chief factor in reduced production was adverse climatic conditions during the main honey-flow season of July and early August. There appeared to be plenty of forage available. The Edmonton Meteorological Station reported 19 days with rain in July, below normal mean temperatures and fewer than normal hours of sunshine. This coincided with reports received from most beekeeping areas in the province.

MARKETS

The record 1961 honey crop moved remarkably well so that by late August when the 1962 crop was extracted no significant carryover existed. It was estimated 7,000,000 pounds of the 1961 crop was exported either to other provinces, (mainly B.C., Ontario, Quebec) or overseas. There was a one-half cent per pound decrease in price of bulk honey received by the beekeeper.

DISEASE CONTROL

Nosema disease of adult honeybees received a great deal more attention in 1962. At the request of Canadian and United States National Beekeeping Organizations an international group was set up to study the Nosema problem. About 90% of the bee colonies kept in the prairie provinces are started each year from package bees obtained in the United States. Where bee colonies are overwintered replacement queens for these colonies are obtained in the United States. An international meeting was held in Madison, Wisconsin, February, 1962. Recommendations for package bees and queen producers and beekeepers were made on the basis of information available. It was obvious more observations and experiments were necessary to determine the incidence of the disease and more adequate control recommendations. Copies of recommendations were sent to all state and provincial apiarists and research personnel in the United States and Canada. A second international group met at Laramie, Wyoming in September to study Chemotherapy of Bee Diseases. U.S. Food and Drug Administration will permit use of Sulpha drugs, the antibiotics Fumagillin and Terramycin for the control of bee diseases. No tolerance of any of these will be allowed in honey.

Nosema survey studies were continued in 1962. Monthly inspection of one group of 65 colonies of wintered bees showed an infection within the colonies of less than 1%, collection of dead bees outside the colonies showed 65% infection, indicating that when weather permits, infected bees fly out of the colonies and do not return. Two other groups of wintered colonies located in a more exposed location, where flying temperatures were less likely, showed a 20%-60% infection within colonies from November to February. Most of these colonies did not survive the winter.

Observations on apiary locations and weather conditions have been made and recommendations made for Fumagillin treatment where conditions exist that are likely to promote an epidemic of Nosema disease. Cost for treatment is from 20-50 cents per colony.

Inclement weather during bee colony season made inspection of bee colonies for American and European foulbrood difficult and in some cases impossible.

	1961	1962
Number of colonies inspected	7,230	4,534
Number of apiaries inspected	468	377
Number of diseased colonies:		
American foulbrood	458	210
European foulbrood	17	26

STATISTICS		
	*1961	**1962
Number of colonies	60,000	65,400
Number of beekeepers	1,390	1,260
Average yield/colony (lb.)	160	108
Total honey production (lb.)	9,600,000	7,063,200
Value of honey ('000 dollars)	1,344	953
Value of wax and honey ('000 dollars)	1,424	1,016
Price of honey per pound	14c	13.5c
Price of wax per pound	42c	45c
* 1961 final		
** 1962 preliminary estimate		

SPECIAL PROJECTS

New Co-operative Municipal Seed Cleaning Plants were built during the summer of 1962 at Delia, Ponoka, Grimshaw, and Fairview. The design remained much the same as in the previous year, however some slight changes were made in equipment. By the end of 1962, forty-eight Plants were in operation. The following is a summary of the work done by the forty-four Co-operative Municipal Seed Cleaning Plants for the fiscal year ending June 30, 1962, with figures for the two previous years also shown.

	1959-1960	1960-1961	1961-1962
Total Commercial Seed Cleaned	6,064,560	7,536,685	8,937,589
Total Pedigree Seed Cleaned	158,419	177,897	118,052
Total Dockage Cleaning	322,266	875,943	811,376
Total Bushels Cleaned	6,422,451	8,590,525	9,885,356
Total Bushels Treated (Fungicide)	1,795,065	2,804,457	3,360,911
Total Bushels Treated (Wireworm)	312,190	581,972	780,462
Average Number of Bushels Cleaned per Plant	189,000	209,525	224,667

The above figures show that approximately one-half of the seed that is seeded in the province annually was cleaned by the Plants.

Government and Municipal grants remained at \$17,000.00 each. This was the second consecutive year that the cost of construction remained almost the same as in the previous year. The average number of bushels cleaned per Plant showed a decided increase which indicated that the Plants were becoming acceptable to the farmers each year.

The general survey of Plants taken in the spring of the year showed a need for a travelling supervisor to co-ordinate the business operations of the Plants. Although the volume was higher than in the past and the work turned out, of a high calibre, many inconsistencies were noted, which if corrected could improve the efficiency of many Associations.

Four Associations were in the process of selling shares at the end of the fiscal year, with the hope of building Plants in the future.

The one Vegetable Co-operative Association formed in 1961 remained inactive although the Department did make a contribution towards some research in the vegetable processing field at the Brooks Horticultural Station during the summer and fall of this year.

CROP CLINIC

A wider acceptance of the diagnostic services provided resulted in a 50% increase in the number of specimens received for examination. A total of 1,170 specimens were handled, as compared with 781 in the previous year. Tables I and II Categorize the submissions under general headings.

Table I.**PLANT DISEASES, INSECTS, BIRDS AND MAMMALS**

	Field Crops	Special Crops	Ornamentals	Shelterbelts	Vegetables	Fruits	Household	Stored Products	Miscellaneous	Farmstead	Livestock	Soil, Water and Feed	Total
Disease	99	89	156	57	48	51	---	---	---	---	---	---	---
Insect's	45	12	79	74	24	22	41	20	19	---	---	---	500
Birds	---	---	2	---	---	---	---	---	---	---	6	---	342
Mammals	---	---	---	---	---	---	---	---	---	---	---	---	2
Contaminants	---	---	---	---	---	---	---	---	---	7	---	---	7
												12	12

Table II.**PLANT IDENTIFICATION**

Weeds	Grains & Grasses	Other Plants	Algae & Fungi	307
202	24	66	15	1,170

INSECTS

A considerable number of specimens of late seeded cereal grains infested with aphids were received from east-central parts of the province. Grain thrips were responsible for partial sterility in some late seeded barley. Leaf feeding insects such as tent caterpillar, willow leaf beetle, and red turnip beetle turned up more frequently than in 1961. Household nuisances like the clover mite, strawberry root weevil, carpet beetle and flour beetle were still numerous. Specimens of blackfly, which bothered livestock in the Vermilion area, were received. There were indications that some cultivated stands of 40-60 year old spruce in central Alberta have outlived their usefulness, as evidenced by the attacks of bark beetles, insects usually associated with tree senescence. Root and cane borers were present in more of the raspberry plants received. So also were boring insects on conifers and broad-leaved trees.

DISEASE

Fireblight continued to be the disease most commonly associated with apples and mountain ash, particularly in areas where these trees were numerous. A disease causing wilt of elderberry accompanied specimens from a wider area than previously. Field surveys and specimens examined at the Clinic indicated that a killing fungus canker on Russian and Northwest poplar was spread over a large area of central Alberta. Diseases of trees, ornamentals and fruits accounted for over half of all disease specimens received. The white rust-downy mildew complex of rape continued to occur frequently, as a result of poor field management practices. Nitrogen deficiency was present

in many seedling grain samples, but common root rot remained generally unnoticed until late heading stage. Bacterial black chaff, and associated diseases of cereal heads apparently developed well during the cool, moist, weather which occurred in August. This type of weather sparked increased submissions of potatoes infected with blackleg and rhizoctonia and, later, carrots with fusarium and sclerotinia rot. Bacterial blight of peas and beans also increased.

Two-thirds of the plants identified were classed as weeds, of which very few were noxious weeds. Eleven weeds poisonous to livestock were received. Algae and fungi examined included poisonous and edible mushrooms. Included under 'Other Plants' in Table 2 are fruits, trees, shrubs and herbaceous plants.

The Clinic was fortunate in securing for 4 months the part-time services of Dr. A. W. Henry, Plant Pathologist, formerly of the University of Alberta. Plant disease specimens accounted for nearly half of all submissions received. Bacterial ringrot survey specimens from commercial potato acreages (with the exception of the Lethbridge area) were, for the first time, handled by the Clinic. This service had previously been provided by the Dominion Plant Pathology Laboratory in Edmonton. A partial survey was conducted to determine the incidence of the fungus organism believed responsible for poplar canker. The Supervisor made a survey of winter kill on native poplar stands in east-central Alberta. Twenty field investigation trips on disease, insect and rodent problems were undertaken. Thirteen meetings and two Conferences were attended. A consulting service was provided to other agricultural, biological, health and industrial workers. In addition to specimens examined, numerous letters and telephone calls concerning a variety of agricultural pest problems received immediate attention. To meet the need for further specialized training the Supervisor attended courses at the University in Botany and Plant Pathology.

Report of the Livestock Branch

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W. C. GORDON, B.Sc., P.Ag., Livestock Supervisor (Cattle)
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I. A. COLES, B.S.A., Supervisor of Feeder Associations
J. S. LORE, B.Sc., P.Ag., Livestock Supervisor (R.O.P. Cattle)
J. J. KALLAL, Livestock Fieldman (Cattle)
S. B. CLARKE, Brand Recorder
J. BELZER, Livestock Investigator
H. M. LINK, Chief Clerk (Supervisor of Pounds)

1962 must be looked upon as a very good year from the livestock point of view. The feed supply was greatly improved over 1961 due to a better distribution of rainfall which resulted in very good grass and forage crops over most of the province. Early fall frosts which reduced a great deal of wheat to lower grades, coupled with exceptionally heavy oat and barley crops in central and northern areas built up feed supplies in a much shorter period than might normally be expected from the dangerously low levels of 1961 and early 1962.

Livestock market prices were higher in all classes from those of the previous year. The prospect of good feed supply and optimism from a profitable 1961-62 feeding season, resulted in much greater numbers of cattle going on feed, probably about $\frac{1}{3}$ more than in 1961, to roughly equal the number that went on feed in 1960. Cattle and calf receipts at stockyards and packing plants from Alberta points was about $2\frac{1}{2}\%$ below the previous year, and export to the U.S. was down about 3% below the previous year. Total brand inspection through all markets increased one half of one percent which indicates the increased movement into Alberta feedlots by-passing the public markets. The average price of good steers on the Calgary market was about $3\frac{1}{2}$ cents a pound above the 1961 average.

Weekly hog marketings were well above the previous years deliveries from January through May, but price levels that in January and February were lower than during the previous January and February, reached the previous years level in early March and remained stronger thereafter, being mainly from \$2.00 to \$6.00 higher than in corresponding months of 1961. Weekly deliveries fell to 1961 levels in the first week of June and were generally smaller for the rest of the year but total 1962 marketings were about 15,000 head greater than the total for 1961. The average price during 1962 over 1961 was slightly over \$2.00 per hundred dressed weight.

As in 1961 the number of lambs going into Alberta feedlots was reduced sharply from the previous year. This resulted from disappointing feeding experience and relatively high prices paid for Alberta feeder lambs by American buyers. Sheep and lamb marketings through public yards and inspected plants were about 10% lower than in 1961. The price level average was generally higher and there was some evidence of improvement under the

changed support program to the deficiency payment system. Prices paid for range ewes in the fall sales were disappointing when related to feeder lamb prices.

CATTLE

Cattle condition was generally good following the rather severe winter of 1961-62 and considering the poor feed situation in the south east part of the province. There were some cattle losses in the spring and calf losses were higher than normal.

Spring pastures were poor particularly in some southern areas.

Feed supplies for the 1962-63 winter are ample except in the south east part of the province, but quality is low in many areas.

Cattle and calf population was estimated at 2,863,000 at June 1st, 1962 which was .6% lower than the June 1st, 1961 census.

Stock inspection figures indicated one half of one percent increase in marketings compared to 1961.

CATTLE AND CALF SHIPMENTS OUT OF PROVINCE

	1958	1959	1960	1961	1962
British Columbia	92,641	73,267	82,831	71,275	56,543
Saskatchewan	1,316	1,408	4,619	8,933	6,747
Manitoba	16,695	23,881	25,463	14,657	19,868
Ontario	52,838	52,569	77,423	98,727	81,587
Quebec	21,039	15,684	15,267	3,017	1,776
Nova Scotia	613	377	1,492	1,675	145
New Brunswick	—	—	—	—	632
United States	200,882	72,928	45,112	110,502	107,084
Newfoundland	—	—	—	—	—
Prince Edward Island	—	—	—	—	—
Total	386,024	240,114	252,207	308,786	274,382

Purebred breeders sold 3,228 beef bulls through 27 consignment sales that were approved by the Department. Sales were held at the following points: Grande Prairie, Olds (two), Calgary, Edmonton, Innisfail, Red Deer, Camrose (two), Mayerthorpe, Stettler, Fort Macleod, Vermilion, Lloydminster, Hardisty, St. Paul, Cereal, Brooks, Taber, Lacombe, High River (two), Lethbridge (two), Drumheller, Medicine Hat and Sangudo.

Breed	No. Sold	Total Value	Average Price
Hereford	2,341	\$1,196,398.00	\$511.00
Aberdeen Angus	492	230,087.00	468.00
Shorthorn	396	152,085.00	384.00

The average price of bulls for all three breeds was practically the same as for the year 1961.

Cattle Improvement Policy

Under Section "A", the option of an applicant to make his own selection of a bull from a local breeder subject to approval as to quality and price by a member of the Department was withdrawn, effective December 31, 1962. There was no change in Section "B".

The following table shows the placement of bulls for the past five years:

Year	Policy "A"	Policy "B"
1958	642	1,058
1959	1,484	1,401
1960	1,911	1,690
1961	1,961	1,686
1962	1,248	1,563

Of the 1,248 applications received under Policy "A", 1,186 were bulls selected by applicants from local breeders subject to approval as to quality by a member of the Department, while 62 were orders for bulls to be selected and shipped to applicants.

Federal-Provincial Beef Cattle Performance Testing Program

This program was initiated in the fall of 1959 and the procedure through which it came into being can be found in the 1959 Annual Report.

An annual report of the Alberta Section of the Federal-Provincial Beef Cattle Performance Testing Program is printed in the termination of each year's results in June. Copies of the first three reports can be obtained from the Livestock Branch.

The following table shows the extent of participation by purebred breeders in the first four years.

Year	No. of Herds	Male Calves Weighed	Female Calves Weighed	Total Calves Weighed
1959	52	489	364	853
1960	63	987	823	1,810
1961	60	1,112	1,015	2,127
1962	75	1,421	1,306	2,727

16 new herds entered the program this year while 1 dropped out.

A meeting of The Alberta Advisory Committee on Performance Testing was held on February 7. The minimum herd requirement was changed to read "A minimum sex group of 5 registerable animals of one breed is required to qualify for test."

The Alberta Beef Cattle Performance Association appealed to the committee to recommend that the Department supervise weights for their members when requested. This was granted and three range herds had weights supervised this year.

5 performance test field days with total attendance of 200 were held to help familiarize the commercial cattlemen with test results. These were held at strategically located premises when test weights were being taken. The field days demonstrated a lack of understanding by cattlemen in applying performance test results to selection. They also pointed out a need for more extension to be done in the field of performance testing.

17 meetings were held where performance testing was discussed with the result that several breeders have reported enquiries for performance tested bulls and 2 applications specifically ordering performance tested bulls were received by the Livestock Branch.

The Livestock Commissioner attended the National R.O.P. beef advisory committee meeting at Ottawa on November 22.

TORONTO ROYAL AGRICULTURAL WINTER FAIR

The 1962 Toronto Royal Agricultural Winter Fair was held November 9th to 17th. The Alberta exhibit consisted of 20 carloads of livestock which were shipped via C.N.R. The shipment left Calgary and Edmonton November 1st.

The exhibit included 40 single steers, 5 carload lots of 12 steers, 5 groups of 5 steers, 52 head of beef breeding stock, 31 dairy cattle, 13 dual purpose cattle, 12 hogs, 70 sheep, 9 draught horses and 6 light horses.

The arrangement whereby freight charges are borne 75% by the Canada Department of Agriculture and 25% by the Alberta Department of Agriculture continued in force. As in previous years, the Alberta Department coordinated selection, assembled the shipment and provided feed and bedding from point of assembly until return.

The following table summarizes prizes won by Alberta exhibitors:

	Horses	Beef Cattle	Market Cattle	D.P. Cattle	Dairy Cattle	Sheep & Wool	Swine	Total
Grand Champion	—	—	—	—	—	1	—	1
Reserve Grand Champion	—	1	—	—	1	1	—	3
Champion	1	2	2	—	—	3	—	8
Reserve Champion	—	—	2	1	1	2	1	5
First Prize	3	5	6	1	2	9	1	27
Second Prize	4	8	9	4	3	5	1	37
Third Prize	1	7	7	7	4	5	2	36
Fourth Prize	2	9	7	1	4	6	1	30
Other Prizes	5	20	22	3	13	13	7	83
Total	16	52	56	17	28	51	13	233

OUTSTANDING ACHIEVEMENTS

T. J. Noad, Olds—Champion carload steers

McIntyre Ranching Co. Ltd.—Reserve Champion carload steers

T. J. Noad, Olds—Champion group of five steers

L. E. Peterson, High River—Reserve Champion group of five steers

Leo Halstead & Sons, Carbon—Reserve Champion Shorthorn steer

W. L. McGillivray, Coaldale—Senior Champion Angus bull

Kallal Hereford Ranch, Tofield—Reserve Grand Champion Hereford bull

Richards Bros., Red Deer—Reserve Grand Champion Ayrshire bull

G. O. McClure, Ohaton—Reserve Junior Champion Lacombe boar

Tom Hudson, Kathryn—Champion Southdown ram

P. J. Rock & Son, Drumheller—Champion Suffolk ewe

D. P. Hays, Calgary—Reserve Champion Suffolk ewe

P. J. Rock & Son, Drumheller—Government of New Zealand trophy (Supreme Champion ewe)

K. K. Paget, Cochrane—Champion Quarter Horse

John Wilson Jr., Innisfail—Reserve Grand Champion fleece

LIVESTOCK FEEDER ASSOCIATIONS

Thirty-eight feeder associations operated under The Feeder Associations Guarantee Act during the 1961-62 season. These associations had 889 active members who fed 28,246 cattle and 10,884 lambs, utilizing a credit of \$3,130,628.90.

All loans under the 1961-62 Guarantees were repaid.

Feeding operations were considerably smaller than the previous year due to a shortage of grain and roughage.

Cattle feeding operations were satisfactory. Members who marketed finished cattle during the latter part of the season received a very good margin.

Lamb feeding operations were not satisfactory.

Indications are that considerably more cattle and calves, but fewer lambs are being fed by association members during the 1962-63 season than the 1961-62 season.

At the beginning of the 1962-63 season, the Highwood Association amalgamated with Little Bow and the Horse Shoe Lake Association amalgamated with Bowden. The names of the continuing associations for the above amalgamations are "Little Bow Feeders' Association Ltd.", High River, and "Bowden Feeders' Association Ltd.", Innisfail.

One new association was organized in the Glenwoodville area at the start of the 1962-63 season.

New regulations beginning with the 1962-63 season, provide for continuous guarantees to associations, as an alternative to the annual guarantees under which all associations operated previously.

The continuous guarantees allow associations to purchase or sell livestock at any time of the year, providing each association member repays all loans at least once in each twelve month period.

Associations operating under the continuous guarantees were required to set up a collective security account comprised of deposits from members, in varying amounts according to the size of member loans. The monies in the collective security account shall be applied on any unpaid outstanding accounts before the guarantee under the Feeder Associations Guarantee Act is effective.

At December 31, 1962, there were thirty-five associations operating under the Act, of which eleven associations were operating under the continuous guarantee and twenty-four associations were operating under the annual guarantee.

Associations operating under continuous guarantees were Big Rock, Carstairs, Central Alberta, East Central, Grande Prairie, Little Bow, Okotoks, Parkland-Stavely, Raven, Red Deer and Vegreville.

1961 - 62 FEEDER ASSOCIATION OPERATIONS

Association	No. of Members	No. of Cattle	No. of Sheep	Credit \$
Acme	11	298	—	36,308.97
Andrew	21	473	—	48,142.65
Bashaw	36	806	1,462	103,613.18
Battle River	66	1,693	—	196,726.45
Big Rock	10	311	—	37,254.61
Big Valley	15	475	—	54,286.51
Bowden	0	313	—	38,347.39
Bow Valley	13	450	402	37,846.49
Cardston	24	675	494	70,631.72
Carstairs	29	1,045	138	117,859.16
Central Alberta	44	1,552	999	165,682.70
Central Peace	17	508	—	57,014.06
Drumheller	14	377	—	44,478.17
East Bow Valley	17	773	178	65,640.98
East Central	52	1,866	1,179	210,193.76
East Olds	25	772	50	77,244.25
Grande Prairie	41	1,229	—	137,336.47
Hays	6	255	382	25,380.80
Highwood	5	101	26	11,159.29
Horse Shoe Lake	11	363	—	46,738.32
Innisfail	12	390	—	43,224.52
Knee Hill Valley	24	645	—	86,125.37
Little Bow	15	488	—	60,115.74
Mannville	24	789	—	63,975.40
Marwayne	34	1,063	—	124,963.65
Meadowbrook	13	622	—	69,454.09
North Peace	36	784	—	86,439.07
Okotoks	10	300	—	34,610.35
Parkland-Stavely	22	1,005	—	94,938.70
Ponoka	36	972	—	128,626.14
Raven	39	1,238	300	147,006.01
Raymond-Magrath	13	543	391	49,782.57
Red Deer	34	1,610	—	177,259.53
South Slope	29	966	2,028	104,741.80
Taber	21	583	1,328	75,675.34
Tilley-Rolling Hills	23	624	857	50,208.63
Vegreville	11	336	—	33,338.85
Western	27	953	670	118,257.21
Total	889	28,246	10,884	3,130,628.90

SUMMARY OF FEEDER ASSOCIATION OPERATIONS COVERING THE PAST
FIVE YEARS

Feeding Season	No. of Associations	No. of Members	Cattle	Sheep	Amount of Credit
1957-58	32	844	24,507	14,514	2,351,826.26
1958-59	34	876	21,707	9,623	2,803,826.05
1959-60	33	1,201	37,194	13,350	4,303,155.09
1960-61	36	1,262	41,743	23,730	4,684,108.24
1961-62	38	889	28,246	10,884	3,130,628.90

ARTIFICIAL INSEMINATION

The practice of artificial insemination continued to expand but in contrast to recent years the expansion was largely by consolidation in existing areas rather than into new, undeveloped areas. Only one new area was organized, that being in the St. Paul district. Change in the industry emphasized refinement of technique and organization, and more interest in artificial breeding in beef herds, particularly under range conditions. Some units made the change from dry ice to liquid nitrogen storage and others laid plans for that change. The progeny testing of beef bulls carried out as a co-operative project between the Ontario Association of Artificial Breeders, the Federal Department of

Agriculture, the Alberta Beef Cattle Performance Association and Safeway Stores, Ltd., provided performance information on beef bulls in service that created considerable interest among beef producers.

During the year a western fieldman, with headquarters in Calgary, was employed by the Ontario Association. The Live-stock Commissioner and Supervisor of Dairy Cattle Improvement attended numerous meetings of A.I. Associations dealing with bull selection, techniques and general unit management.

It is estimated that approximately 87,000 cows were bred artificially in Alberta during the year.

DAIRY HEIFER CALF POLICY

The same calf pick-up policy, from August 1st to December 31st was followed and provided ample calves for the orders received. A total of 167 calves were supplied to 19 different 4-H clubs. The rather sharp reduction in the number of clubs ordering calves through the Department would appear to be due to increased supply in the local areas served by clubs.

SWINE

Alberta hog producers had a profitable year. A total of 1,674,177 hogs were marketed in 1962 compared to 1,659,909 head in 1961. The average grade "A" price at Edmonton stock-yards was \$26.70/cwt. compared to \$24.80 in 1961. Prices fluctuated from a low of \$22.40 week ending of January 6th to a high of \$31.70 week ending August 18th.

Quality of market hogs showed further improvement with 33.6 percent grading "A", and less than 8 percent grading "C", compared to 27.4% "A's" and 11.6% "C's" in 1961. Increased supply of tested breeding stock and activities of the various Provincial Swine Improvement policies was in a large measure responsible for this quality improvement.

A total of 18 Live Bacon Hog to Carcass Demonstrations and Meetings were held during the year. Each program consisted of demonstrating six different types of live market hogs. These hogs were individually identified, sent to slaughter, and carcasses returned a few days later for comparative carcass quality and cut-out values. Swine management and feeding problems were also discussed at each meeting.

The Federal deficiency floor price on Canadian hogs was set at \$23.65 applicable to a maximum of 100 "A" and "B" grade hogs per farm unit. Due to Federal austerity program, premiums on grade "A" hogs were reduced on September 4th from \$3.00 per head to \$2.00.

The Federal Record of Performance Test Station for Swine continued to operate to over-flow capacity. In the fiscal year, April 1st, 1961 to March 31, 1962, 169 sows were tested, of these 44 were home tested due to lack of test station space. A total of 74 separate swine breeders participated in R.O.P. testing. This Department's policy of assistance to participating breeders was

continued without change from the previous year. Tabulated report elsewhere show operational details of this policy.

Revision of The Swine Improvement Policies A and B became effective October 1st. Under Policy "A" the bonus was removed, but the service of purchasing and shipping, and payment of shipping charges was retained. Policy "B" was revised as follows:

The Department contributes toward the purchase price of an approved boar to the following extent:

- (a) On any approved boar selling at \$70.00 or more, ten dollars.
- (b) On any approved boar selling at a price between \$60.00 and \$70.00 an amount equal to the difference between the selling price and \$60.00.
- (c) On any approved Record of Performance boar as defined, selling for \$110.00 or more, a further contribution of \$10.00, in addition to that set out in (a).

"Record of Performance Boar" means a boar whose dam has officially attained a minimum carcass score of 75 in not over 200 days under the Record of Performance Testing Program for swine.

The Livestock Listing Bureau continued as a service to applicants not eligible under Policies A or B, and those requiring sows. This Policy did not provide for a bonus or the payment of shipping charges.

At the request of Swine Sale Associations, Policy "B" was applied to 19 Approved Swine Sales. Assistance in the selection and culling of Pure Bred swine at these sales was provided by this branch.

The Alberta Lacombe Breeders Association sponsored a sale in October, confined to entries of that breed.

PRICE AVERAGE COVERING ALL ALBERTA SALES (Including R.O.P.)

	1961		1962	
	Number	Av. Price	Number	Av. Price
Boars				
Yorkshire	606	92.43	589	90.07
Tamworth	8	81.25	7	78.93
Landrace	35	81.14	8	79.06
Lacombe	86	98.40	71	102.08
Total & Average	735	92.47	675	91.09
Sows				
Yorkshire	703	92.35	619	89.46
Tamworth	18	84.03	2	66.25
Landrace	46	83.64	5	65.00
Lacombe	84	96.99	151	87.10
Total & Average	851	92.16	777	88.73

AVERAGE PRICE FOR ALL SWINE BREEDS AT CALGARY AND EDMONTON SALES

	1961		1962	
	Number	Av. Price	Number	Av. Price
Boars	362	104.48	327	89.44
Sows	505	99.56	447	90.20

PRICE AVERAGE FOR REGIONAL SALES ONLY (not R.O.P.)

Boars	1961		1962	
	Number	Av. Price	Number	Av. Price
Yorkshire	293	79.48	280	91.28
Tamworth	2	55.00	1	50.00
Landrace	14	60.89	1	105.00
Lacombe	36	88.68	39	98.59
Total & Average	345	79.54	321	92.08
Sows				
Yorkshire	268	81.88	236	81.76
Tamworth	4	66.87	—	—
Landrace	19	80.92	—	—
Lacombe	33	80.91	72	83.75
Total & Average	324	81.54	308	86.05

AVERAGE PRICE OF SPECIAL LACOMBE SWINE BREED SALE

Lacombe boars	23	108.69
Lacombe sows	36	86.87

AVERAGE PRICES AT CAMROSE R.O.P. SWINE SALE

Boars	1961		1962	
	Number	Av. Price	Number	Av. Price
Yorkshire	23	94.46	24	96.35
Lacombe	5	106.00	3	123.33
Total & Average	28	96.52	27	99.35
Sows				
Yorkshire	21	79.28	16	101.06
Lacombe	1	70.00	6	90.00
Total & Average	22	78.86	22	98.05

SWINE PLACED UNDER IMPROVEMENT POLICY "A" AND LIVESTOCK LISTING BUREAU

Year	L.L.B.		Policy "A" Boars	Total Boars
	Gilts	Boars		
1958	9	19	234	253
1959	11	15	257	272
1960	8	27	264	300
1961	10	24	186	210
1962	7	22	162	184

This total includes 117 Yorkshires, 41 Lacombe, and 4 Landrace.

BONUS PAYMENT ON POLICY "B" BOARS AT ALL ELIGIBLE SALES

	1959	1960	1961	1962
Number of boars bonused	288	370	376	341

RECORD OF PERFORMANCE SOW BONUS POLICY

Number and breed of sows qualifying for bonus:

	1960	1961	1962
Yorkshire	43	22	20
Landrace	5	—	—
Lacombe	5	20	13
Total	57	42	33

ALBERTA HOG GRADINGS FOR YEARS 1959 TO 1962

Grade	1959 %	1960 %	1961 %	1962 %
A	22.30	22.40	27.40	33.10
B	49.30	47.60	45.40	43.20
C	13.80	15.20	11.60	8.10
Light	2.60	3.10	2.80	3.40
D	1.30	0.90	.90	1.10
Heavy	2.50	4.20	3.90	3.60
Extra Heavy	1.80	1.70	1.70	1.60
Injured	—	—	—	—
Rdlg.	.50	.50	.50	.50
Stags	.60	.60	.60	.60
Sows	5.30	3.80	5.20	4.70

NUMBER AND VALUE OF ALBERTA HOGS SOLD AT INSPECTED PLANTS

Year	Total Number	Value per Pig	Total Sale Value
1958	1,812,186	41.17	74,618,843.00
1959	2,265,430	32.99	74,729,118.00
1960	1,764,695	32.76	57,809,266.00
1961	1,659,909	38.89	64,537,262.00
1962	1,674,177	39.80	65,632,244.60

ESTIMATED NUMBER OF SWINE ON ALBERTA FARMS AT JUNE 1st

1958	1,710,000
1959	1,780,000
1960	1,385,000
1961	1,540,000
1962	1,200,000

SHEEP

Interest in sheep production dropped off sharply this year. Lower lamb prices in 1961 was the main cause. Very few breeding ewes were moved from the south to northern districts. This resulted in disappointingly low ewe prices at sheep sales in southern Alberta. Demand for rams at Pure Bred Sheep Sales and from private sources was weak and prices were lower than last year.

1961 Federal Stabilization support price on lambs was rescinded and replaced by a Deficiency Floor Payment on Lamb set at \$18.80/cwt. basis national price average equivalent to \$20.40 at Toronto. The policy became effective on July 1st. This arrangement applied only to good and choice lamb grades dressing 36 to 56 pounds. Lambs were producer-identified at marketing by a prescribed ear tag; slaughtered at an inspected Plant and Graded by a Federal Meat Grader. The 1962 average market price of good and choice lamb at Edmonton yards was \$17.10/cwt. However, higher lamb prices at Winnipeg and Toronto brought Canadian average well above the deficiency floor of \$18.80.

The Federal quality premiums of \$2.00 and \$1.00 per carcass for choice and good lambs, respectively, continued in effect and was extended on July 1st to include carcasses in the 52 to 56 pound weight range.

Sheep Shearing and Management Schools were held at the following: Cardston, Morrin, Stanmore, Lacombe, Gunn, Rossington, Athabasca, Plamondon, Mallaig, Crooked Creek, Belloy, Fairview, and Reno. Power shearing only was demonstrated. All phases of sheep management and marketing was discussed. All schools were of one day duration and ran from May 23 to June 7th. Schools were directed by A. J. Charnetski and assisted by R. Shopland, Secretary-Manager of the Co-op Wool Growers Association at Edmonton. Power shearing was demonstrated by Mr. E. Calhoon of Cardston.

Approximately 43,000 feeder lambs went into feed lots this fall, compared to 57,000 in 1961 and 70,000 in 1960. Price of feeder lambs ranged from \$14.00 to \$17.50. Several thousand feeder lambs and aged ewes were sold to U.S. buyers early in the fall.

The 1962 wool clip was approximately 2,172,000 lbs. Wool yield averaged about 9.5 lbs. per head. The Federal wool deficiency support price remained at 60c per lb. F.O.B. Toronto.

Cross breeding sheep demonstrations started at Olds, Vermilion and Fairview Schools of Agriculture in 1961 neared completion of the first year's operation. Second year's project was started with the reciprocal breeding of the original groups of ewes. At Vermilion Suffolk, and Columbia x Suffolk, cross-bred ewe lambs were bred to a North Country Cheviot ram. At Fairview the cross bred ewe lambs of Romnelet x North Country Cheviot; Romnelet x Hampshire; Rambouillet x Hampshire and Rambouillet x North Country Cheviot were mated to a pure bred Suffolk ram. It is planned that all progeny of these ewe lambs will be weaned at approximately 90 days of age and finished to market weights in a feed lot.

Record of Performance in sheep was continued at Vermilion and Olds Schools of Agriculture. A number of private sheep breeders continued R.O.P. testing of their flocks under Branch direction.

Revision of The Sheep Improvement Policies "A" and "B" became effective on September 1st. These revisions were as follows:

The Department contributes toward the purchase of any approved ram to the following extent:

- (a) On any approved Breeder (BR) or Grade A ram selling at \$47.00 or more, \$12.00.
- (b) On any approved Breeder (BR) or Grade A ram selling at a price between \$35.00 and \$47.00, an amount equal to the difference between the selling price and \$35.00.
- (c) On any approved Commercial (CL) or Grade B ram selling at \$43.00 or more, \$8.00.
- (d) On any approved Commercial (CL) or Grade B ram selling at a price between \$35.00 and \$43.00 an amount equal to the difference between the selling price and \$35.00.

Statistical details on the operation of Policy "A" and "B" and details on sheep sales are tabulated hereunder:

COMPOSITE SUMMARY OF PUREBRED SHEEP SALES AT CALGARY AND EDMONTON

Rams	1961		1962	
	Number	Av. Price	Number	Av. Price
Suffolk	78	55.54	41	53.23
Hampshire	23	43.15	11	56.13
Border Cheviot	1	35.00	2	32.50
North Country Cheviot	23	64.13	24	47.50
Corriedale	9	41.66	6	60.83
Southdown	8	40.62	4	40.00
Oxford	2	37.50	3	40.83
Columbia	2	42.50	2	45.00
Total & Average	146	52.70	93	50.99
Ewes				
Suffolk	57	32.75	34	33.68
Hampshire .....	.....	.....	4	15.00
North Country Cheviot	9	48.32	19	31.31
Corriedale .....	.....	.....	3	32.50
Southdown	4	35.00	.....	.....
Oxford	9	25.55	1	30.00
Columbia .....	.....	.....	14	32.37
Total & Average	79	33.82	75	32.37
Grade Ewes	96	14.03	96	11.21

The following table shows sheep placed under the Livestock Listing Bureau and Sheep Improvement Policy "A":

Year	Grade Ewes	L.L.B. Rams	Policy A Rams	Total Rams
1958	110	6	73	79
1959	276	8	91	99
1960	140	1	93	99
1961	120	13	56	69
1962	—	3	30	33

1962 Ram placement consisted of:

15 Suffolk	1 Southdown
1 Columbia	2 Oxford
1 Corriedale	2 Targhee
7 North Country Cheviot	

POLICY "B" RAMS QUALIFYING FOR BONUS AT ALL ELIGIBLE ALBERTA RAM SALES

Year	A Grade Rams	B Grade Rams	Total A and B Grades
1959	58	28	86
1960	52	64	116
1961	36	38	74
1962	42	3	45

AVERAGE RAM PRICES, BY GRADES, AT CALGARY AND EDMONTON SALES

	1961		1962		1961		1962	
	No.	Av. Price	No.	Av. Price	No.	Av. Price	No.	Av. Price
"A" Grade	49	55.97	54	52.50	30	66.66	28	51.88
"B" Grade	21	44.76	5	44.50	40	45.44	9	36.95

AVERAGE PRICE OF ALL A AND B GRADE RAMS—CALGARY & EDMONTON SALES

	1961		1962	
	No.	Av. Price	No.	Av. Price
"A" Grade	79	60.04	82	52.89
"B" Grade	61	45.20	14	39.65

NUMBER AND VALUE OF ALBERTA SHEEP AND LAMBS SOLD AT INSPECTED PLANTS

	Total No. Sold	Value Per Head	Total Sales Value
1960	159,602	\$15.36	\$2,451,654.00
1961	214,412	13.86	2,981,715.00
1962	170,452	12.71	2,174,444.92

ESTIMATED NUMBER OF SHEEP IN ALBERTA AT JUNE 1st

1958	470,000
1959	530,000
1960	555,000
1961	554,000
1962	445,000

HORSES

The horses population continued to decline. Estimated number of horses at June 1st was 109,000 head compared to 113,200 head at June 1, 1961. One horse sale at Calgary, the class D stockyards and the slaughter plant at Edmonton continued to be the main horse trading points. The Edmonton plant handled approximately 1,000 head, or about 15% less than in 1961. Interest in light horses remained high, and the extreme shortage of good heavy horses resulted in somewhat better prices for those available to fill demand.

ALBERTA LIVESTOCK AND LIVESTOCK PRODUCTS ACT

Stockyards and Stockyard Licensing

Four hundred and fifteen licenses were issued in 1962.

Thirty-one licenses were altered owing to change of ownership, reclassification or discontinuance resulting in 415 licensed stockyards being in operation to December 31, 1962. However, Class "D" stockyards (auction markets) again showed a sharp increase of nine new establishments at the following points: Morinville, Sangudo, Rycroft, Bonnyville, Evansburg, Picture Butte, Didsbury, Strathmore and Berwyn.

Coronation was reclassified from an "E" to a "D". Three

class D markets ceased operation, and seven licenses were issued because of changing ownership or change of classification.

The following table shows licenses issued by classes:

Class Number	B	C	D	E	F	G	Total
	13	46	67	3	4	282	415

A total of 57 class "D" stockyards were in operation at December 31, 1962.

The following table shows the number of livestock sold at Class "D" Stockyards (auction markets):

	1958	1959	1960	1961	1962
Cattle & Calves	131,508	164,477	267,612	350,020	396,800
Hogs	238,355	271,211	224,521	303,416	271,754
Sheep	13,772	15,724	29,014	32,224	41,919
Horses	4,798	6,481	8,940	8,200	10,935
Total	388,433	457,893	530,087	693,860	721,408

Class "E" and "F" Stockyards (Community Cattle Auctions) operated at Pincher Creek, Lundbreck, Pakowki, Park Bend, Walsh and Lea Park. Thirty-four such sales handled 22,926 head of cattle compared to 24,812 in the previous year. The reduction in numbers handled resulted to some extent from increased activity by class "D" stockyards, but also from increased selling early in the summer due to poor pasture conditions in the south-eastern part of the province.

Livestock Dealers and Dealers' Agents

Regulations were altered, and became effective July 1st, to include all organizations acting as livestock selling agents, as livestock dealers, and to permit out-of-province buyers to buy at bonded Alberta markets without obtaining an Alberta dealers license. This action resulted in licensing and bonding all auction markets and community auction sales as livestock dealers and eliminated much of the friction and misunderstanding that had previously existed with out-of-province buyers. Such buyers are required to be licensed and bonded for any buying other than from a licensed and bonded Alberta dealer or livestock selling agent.

Livestock dealers employing agents, Limited Companies or Co-operatives, and all livestock selling agents required a minimum bond of \$10,000. Individuals with no agents were required to have a minimum bond of \$5,000.00.

It was not necessary to recall the proceeds of any livestock dealer bond.

Dealers and agents totalled 874, compared to 823 in the previous year, for an increase of 6.2%.

There were four prosecutions and a number of warnings issued for dealing without license. All stockyards were visited at least once, some markets several times, and a number of investigations were conducted as a result of complaints by producers, market operators and shippers with respect to trade practices.

RECORDING OF BRANDS

Interest in recording of livestock brands remained high. This resulted from continued development of community pastures and some evidence of increased activity in cattle theft.

Following is a summary of brand office activity:

	Cattle	Horses	Sheep	Poultry	Total
New Brands Issued	2,021	203	1	—	2,225
Transfers Registered	400	35	—	—	435
Certified Extracts Issued	1	1	—	—	3
Brands Renewed	5,993	740	2	1	6,736
Brands Cancelled	199	85	—	—	284
Total	8,615	1,064	3	1	9,683

The number of brands in good standing as at December 31, 1962:

Cattle	32,042
Horses	4,161
Sheep	30
Poultry	14
Fur Bearing	2
	<u>36,249</u>

There were a total of 3,463 letters written during the year dealing with the above and also the use of unregistered brands.

The Brand Act was amended increasing registration and re-issuing fees from \$2.00 to \$5.00. This change became effective April 1st.

Preparing data for the 1962 Brand Book was started in April, and with the regular staff, one extra typist was required. Also, when possible, the Livestock Branch assisted. The brand characters were drafted by Miss Hawreliak of the Brand Office staff.

The completed material for the new Book, which contains 35,680 brands and tattoos, was delivered to the Printers on August 16th. Eight hundred copies were printed for distribution to various enforcement agencies and public sale.

STOCK INSPECTION ACT

Stock inspection reached a record total of 1,461,887 head, inspected on all markets and direct on export. Inspections of cattle returned to feedlot, cover crop and pasture from classes A, E and F stockyards was up 11.4% at 231,908 head. Total "in" and "out" inspections covered 1,693,795 head.

Regular staff inspectors working from Edmonton, Calgary, Lethbridge, Medicine Hat, Red Deer and Lloydminster worked 29 different inspection points. Twenty-three deputy inspectors worked 35 different sale points, mainly auction markets. In addition to the total of 64 regular inspection points, numerous spot inspections were made for export shipment. Inspection was started at markets at Lacombe, Coronation, Westlock, Didsbury, Killam, Fairview and Berwyn. A full time resident inspector was placed at Red Deer.

New packing plants opened at Red Deer, Lethbridge and Medicine Hat, by Red Deer Packers Ltd.; Canadian Dressed Meats Ltd.; and the Alberta Western Beef Co. Ltd.; respectively, were inspected by resident inspectors at those points. Inspection by R.C.M. Police was conducted only under special circumstances where it was impractical to service by full time or deputy inspectors. Total R.C.M.P. inspection was 0.7% of the total number inspected. The number of stock held up for further investigation remained constant at approximately 2,000 head. All were cleared by inspectors with the exception of 42 files covering 53 animals. These were further investigated and cleared from branch headquarters.

Continued decentralization of marketing tended to make inspection more complex and more costly.

Two hundred and forty-six butchers and hide dealers were licensed. However, only 184 slaughtered for resale. This was a reduction of 28 from the previous year.

IMPROVEMENT DISTRICT STRAY ANIMALS ACT

Active pounds in operation numbered approximately 142. Two new pound districts were established and alterations were made to several existing pound districts.

THE HORNED CATTLE PURCHASES ACT

Considerable variation still existed between areas with respect to percentage of cattle marketed with horns. The Peace River area has the highest percentage, and the ranching areas have the lowest.

The provincial average was 8% compared to 8.2% the previous year.

The following table shows the percentage of cattle with horns at the main market centres:

	1949	1959	1960	1961	1962
Edmonton	19.9	11.8	11.8	11.0	11.2
Calgary	15.6	6.9	7.0	6.5	5.9
Lethbridge	—	8.2	7.5	5.8	7.3
Medicine Hat	—	—	—	—	8.1

GENERAL

Branch personnel serviced numerous extension meetings in addition to those normally falling within the administration of policies. Following is a summary of meetings and official duties attended or conducted by Branch personnel:

Farm Visits	Meetings and Short Courses	Livestock Judging Assignments	Culling and/or Purchasing at Sales	Stockyard Visits	Butcher and Hide Dealer Visits	Sales Brand Inspected
1,062	185	48	57	184	321	24

Mr. J. S. Lore attended the Performance Registry International Annual Meeting in June at Corvallis, Oregon. The Livestock Commissioner represented the Department at the National R.O.P. beef and swine meetings at Ottawa in November. He also attended the Royal Winter Fair as Departmental officer in charge of the Alberta Livestock Exhibit. Mr. J. J. Kallal acted as immediate supervisor of the livestock train and exhibit. Mr. W. S. Baldwin, a member of the branch from January, 1937 to June 30, 1962, with the exception of 4½ years service with the Canadian Army during World War II, retired at the latter date. Mr. Baldwin's work in livestock investigation and with development and enforcement of livestock dealer and stockyard regulations exhibited intimate knowledge of the livestock trade.

ACKNOWLEDGEMENTS

The continued co-operation of the various breed associations, sale and exhibition associations, and commercial organizations dealing in the livestock field, together with the support of the R.C.M. Police in matters of investigation and enforcement, of other Departments of the Government, and the Federal Production and Marketing Services, was greatly appreciated and is hereby acknowledged.

Report of the Dairy Branch

D. H. McCALLUM, B.S.A., P.Ag., Dairy Commissioner

*L. M. SILCOX, B.S.A., P.Ag., Supervisor, Dairy Plant Inspection

R. P. DIXON, B.Sc., P.Ag., Supervisor, Dairy Cattle Improvement

V. W. KADIS, Ph.D., Director, Dairy Laboratory

L. H. ARNOLD, Supervisor, Frozen Food Locker Plants

W. A. McGRATH, Charge of Dairy Statistics

*Deceased

GENERAL REVIEW

Milk production during 1962 amounted to 1,665,000,000 pounds which was a decrease of 3.2 per cent from the all time record established in the previous year. Competition from grain and beef resulted in a decrease of 8,000 head of milk cows which was 3 per cent less than the 288,000 reported by the 1961 census. Pasture conditions varied considerably, with drought in the south eastern area and flooding of low lying pastures in the northern part of the province, adversely affecting the quantity and quality of dairy cattle roughage. The average milk production per cow on the basis of all cows kept for milk purposes was 5,946 pounds, representing a decline of 31 pounds from the record established in 1961.

Farm prices for dairy products remained at the support level provided for by the Agricultural Stabilization Act and were practically the same as the previous year. Commencing May 1st a new selling price for creamery butter was introduced which reduced the consumer price by 12 cents per pound. This program had the effect of not only preventing a further decline in the consumption of butter, but increasing it by approximately 3,000,000 pounds per month.

The farm value of milk and dairy products amounted to 50 million dollars which was about 2 million less than the corresponding value for 1961. The factory value of dairy products plus that portion of milk and by-products used on farms amounted to just over 70 million dollars. This total value was 1.2 million dollars greater than the previous year and was due mainly to increased costs for processing fluid milk and a diversion of milk from butter to evaporated milk with a higher selling value.

There was some change in the utilization of milk during the year. The percentage utilized for creamery butter was lower, but larger percentages were used for fluid sales, ice cream, and concentrated products. The percentage utilized on farms was the same as that of the previous year.

Interest in cow testing continued to expand with 14,486 cows in 496 herds being tested for production. The average production of these cows was 10,455 pounds of milk and 370.6 pounds of butterfat which was slightly less than that of the previous year. However, this is almost double the production of all cows kept for milk purposes and emphasizes the value of a testing program.

Bulk tank operations were further extended during the year in the Calgary, Red Deer and Medicine Hat fluid milk sheds. There were also a few bulk tanks installed in smaller fluid markets and for manufacturing milk in the central part of the province.

The quality of Alberta dairy products, an item receiving special attention by industry and government for many years, showed a slight improvement during the year. Greater emphasis was placed on the quality of milk used for manufactured products and this resulted in a higher percentage of first grade cheese. Alberta entries of creamery butter at Canadian exhibitions again won a large share of top prizes. The laboratory extended its service to the industry and regulatory bodies, resulting in improved quality and greater consumer acceptance of practically all dairy products.

The number of locker plants operating in the province decreased by ten. This adversely affected the volume of frozen food stored in lockers, however, there was some increase in the volume of processing for home freezers and those plants continuing operations showed a gain in processing volume. There was a trend toward the establishment of new processing plants for servicing home freezer customers.

ESTIMATED FARM VALUE OF ALBERTA MILK PRODUCTION 1962

The quantity, price, value and utilization of milk production during 1962 is reported in the following table. To indicate changes from the previous year, the 1961 figures have been included.

	Year	Pounds	Milk Equivalent Pounds	Per Cent Total Milk	Price	Value
Butterfat for Creamery Butter	1962	30,170,000	909,816,000	54.6	.662 per lb.	\$19,972,000
	*1961	33,178,000	958,564,000	55.7	.661 per lb.	21,931,000
Farm Dairy Butter	1962	1,642,000	38,423,000	2.3	.59 per lb.	969,800
	1961	1,866,000	43,664,000	2.5	.60 per lb.	1,120,000
Milk and Butterfat for Ice Cream (milk basis)	1962		29,540,000†	1.8	2.84 per 100 lbs.	839,000
	1961		63,544,000	4.0	2.84 per 100 lbs.	1,947,000
Milk for Cheesemaking and Concentrating	1962		101,436,000	6.1	2.90 per 100 lbs.	2,941,000
	1961		71,167,000	4.1	2.63 per 100 lbs.	1,907,000
Fluid Milk Sales	1962		323,074,000	19.4	4.61 per 100 lbs.	14,887,000
	1961		311,627,000	18.1	4.62 per 100 lbs.	14,382,000
Cream Fluid Sales (milk basis)	1962		60,217,000	8.6	2.79 per 100 lbs.	1,681,000
	1961		57,680,000	3.4	2.81 per 100 lbs.	1,623,000
Milk Farm Home Consumed	1962		139,200,000	8.4	2.65 per 100 lbs.	3,689,000
	1961		145,000,000	8.4	2.65 per 100 lbs.	3,843,000
Fed Form Animals	1962		63,560,000	3.8	2.65 per 100 lbs.	1,684,000
	1961		65,250,000	3.8	2.65 per 100 lbs.	1,729,000
Kept on Farms Skimmilk from Creamery Butter and Skimmilk and Buttermilk from Dairy Butter	1962	815,598,000			.40 per 100 lbs.	3,262,000
	1961	872,608,000			.40 per 100 lbs.	3,490,000
Total	1962		1,665,266,000	100.00		49,924,000
	1961		1,721,496,000	100.00		51,974,000

* Includes butterfat used in the manufacture of butter oil.

† Because of the above normal use of butter in the manufacture in ice cream mix, the milk equivalent of this product has been reduced in order to prevent duplication in reporting these two products, however, the quantity of ice cream manufactured increased by 3.7 per cent.

ESTIMATED PRODUCTION AND VALUE OF FACTORY DAIRY PRODUCTS

The following table shows the quantity, price and value of dairy products manufactured or processed in Alberta dairy manufacturing plants during 1962 with corresponding figures for 1961 added for sake of comparison.

	Year	Quantity	Price	Value
Creamery Butter, lbs.	1962	38,928,000	¢ .6250 per lb.	\$24,330,000
	1961	40,917,000	.6211 per lb.	25,414,000
Cheddar Cheese, lbs. (including net increase in processing)	1962	1,672,000	.3990 per lb.	667,000
	1961	1,780,000	.3590 per lb.	639,000
Ice Cream, Gallons*	1962	4,042,000	1.52 per gal.	6,144,000
	1961	3,897,000	1.52 per gal.	5,923,000
Fluid Milk Sales, lbs. (including processing charges)	1962	323,074,000	6.21 per 100 lbs.	20,063,000
	1961	311,627,000	6.12 per 100 lbs.	19,072,000
Cream as Milk, lbs. Fluid Sales (including processing charges)	1962	60,217,000	4.39 per 100 lbs.	2,644,000
	1961	57,680,000	4.31 per 100 lbs.	2,486,000
Skimmilk and Buttermilk Sales for Human Consumption (including processing charges)	1962	19,598,000	3.55 per 100 lbs.	696,000
	1961	18,976,000	3.45 per 100 lbs.	655,000
Skimmilk, Buttermilk, lbs.	1962	59,176,000	.40 per 100 lbs.	237,000
	1961	44,862,000	.40 per 100 lbs.	179,000
Whey, lbs.	1962	14,349,000	.20 per 100 lbs.	29,000
	1961	14,993,000	.20 per 100 lbs.	30,000
Miscellaneous Manufactured Products**	1962			5,950,000
	1961			4,158,000
Total	1962			60,760,000
	1961			58,556,000

* Includes hard and soft ice cream.

** Includes concentrated milk products, cottage cheese, whey butter, cheese other than cheddar, yoghurt, butter oil and butter concentrates.

BRANCH EXTENSION ACTIVITIES

Representatives of the Branch attended and addressed several meetings of dairy producers, dairy cattle breeders, dairy plantmen, locker plant operators, 4-H dairy calf clubs, public and high school students. Assistance was given provincial organizations such as the Alberta Dairywomen's Association and the Alberta Quick Freeze Locker Association in arranging convention programs, regional meetings and field days. Senior Branch officials again devoted considerable time attending meetings of boards and committees dealing in work related to those industries being served by this Branch.

Press, radio and T.V. publicity was prepared and in many cases presented by Branch personnel. Monthly newsletters, circulars, leaflets and bulletins were prepared and distributed to dairy farmers and the industries being served.

Assistance was given the Department of Dairy Science, University of Alberta, and Canadian Vocational Training in conducting a four week short course in dairy production. The majority of those attending were fieldmen engaged by the various dairy processing firms. The training given should prove valuable in assisting dairy producers to supply top quality products.

A three day course of instruction was given in Calgary during February to receivers and graders of bulk tank milk. A total of 24 attended this course with 19 receiving a tank milk

grader's license after demonstrating their ability to the satisfaction of the dairy inspector.

Official weight certificates were again issued by the Branch to manufacturers supplying butter to the Agricultural Stabilization Board. A total of 8,240 boxes were check weighed which represented a total of 3,876,320 pounds of creamery butter.

DAIRY PLANT INSPECTION AND INSTRUCTION SERVICE

DAIRY PLANTS

There were 121 operating licenses issued to dairy plants during the year. The Carnation Company Limited commenced operating their new milk evaporating plant at Wetaskiwin, April 1st. A new milk pasteurizing plant opened at Two Hills by Mr. M. Chomik on October 1st. The Northern Alberta Dairy Pool Limited closed operations at the Millet and Round Hills branches on October 31st. Purity Dairy acquired the milk pasteurizing business of Youville Dairy at St. Albert commencing on July 7th. On November 1st this operation was moved from St. Albert to Edmonton.

On September 17th, the McLennan Dairy was closed. This milk pasteurizing business was integrated with that of the High Prairie Creamery. Stettler Milk Company Limited plant closed on March 1st and the milk processing business acquired by the C.A.D. Pool, Stettler. Nanton Creamery discontinued their milk pasteurizing department during June and Claresholm Creamery took over this business.

INSPECTION AND INSTRUCTION

With the transfer of L. M. McKnight from inspection service to the Dairy Branch Laboratory, D. J. Christiansen was appointed on May 7th to cover the Edmonton northwest district.

Total inspection reports submitted by the field staff during the year was 1,475. Check grading was carried out on 89,114 cream shipments. Official tests for butterfat content of cream and milk were 28,352. Adjustments to correct errors in payments to producers on account of grading and/or testing amounted to 1.1 per cent of the total.

BULK MILK HANDLING

At the year end the number of bulk tanks in use on dairy farms was 866. This represents an increase of 129 over the previous year. Most of the new installations were made in the Calgary and Medicine Hat milk sheds. Some conversion from cans to bulk has commenced in the Red Deer-Lacombe-Ponoka areas. Calibration of all new installations together with recalibration of tanks, where the accuracy was questioned, were checked by the Dairy Branch inspectors. The total number checked was 149. Dairy Branch officials also completed check weighings on 202 truck loads of milk.

QUALITY CONTROL

Increasing emphasis on quality improvement of raw and finished products was general. Most important contributing factors were: (1) continuing conversion to bulk tank method of handling on fluid milk farms, (2) extended field work program planning by dairy companies in quality improvement on patron farms, (3) acceleration of the program designed to eliminate unsuitable cream and milk shipping containers which have been contributing to lowered quality, (4) increased attention to replacement of older type processing equipment at plants in favour of modern equipment, (5) special studies throughout the industry in sanitation problems to establish best methods and materials for use under varying conditions, (6) extensive renovations of processing plants, milk houses, etc. using modern materials which facilitate the sanitation and convenience aspects of operation.

LICENSING AND BONDING

Renewal of operating licenses with required bonding was based on satisfactory maintenance of general manufacturing conditions.

Where license holders in milk and cream grading and testing performed their duties with reasonable accuracies, renewals were issued. Candidates for new licenses were required to pass written and practical examinations under supervision of district Dairy Branch inspectors.

Licenses issued in 1962 with corresponding figures for the previous year, in brackets, are shown below:

Form "A"	(Milk and Cream Testers)	279	(268)
Form "B(C)"	(Cream Graders)	219	(213)
Form "B(M)"	(Milk Graders)	162	(161)
	(Tank Milk Graders)	107	(82)
Form "C"	(Dairy Manufacturing Plants) ...	121	(120)

COMPETITIONS

As in previous years, butter and cheese exhibits were forwarded by Alberta plants to Edmonton for packing and shipping by the Dairy Branch to the leading Canadian exhibitions and also to the Scottish Dairy Show, Glasgow. Transport costs to the Royal Winter Fair and ocean freight to the Scottish Dairy Show were paid by the Alberta Department of Agriculture. A total of 147 entries were forwarded to these shows with Alberta exhibits well to the fore in prize awards. Winners of special prizes in butter competitions were South Edmonton Creamery Company and Independent Creameries Limited, Lacombe.

Annual competitions as outlined in the yearly competitions booklet were designed to encourage production of top quality raw and finished products. In arranging these competitions, the Dairy Branch was assisted by the Canada Department of Agriculture and the Alberta Dairymen's Association.

Judging panels consisting of qualified plantmen and Dairy Branch personnel were established at Edmonton and Calgary to

score samples of ice cream and cottage cheese. These judging sessions were assembled simultaneously in each city to score identical samples four times during the year. The final results were based on average scores.

A pattern of scoring has been established for the annual Dairy Plant Merit Award Competition whereby each dairy plant is appraised on points allowed for good housekeeping, sanitation, convenience, etc. Preliminary scores were submitted by district inspectors with the final judging of top scoring plants being carried out by senior officials from the Dairy Branch, Edmonton.

DAIRY CATTLE IMPROVEMENT SERVICE

DIVISION ACTIVITIES

1. The principal activity of this division was the Cow Testing Service. Supervision, correspondence and record certification were carried out by the supervisor.

2. Assistance was given to artificial insemination units throughout the year in bull selection, conception rate reports and attendance at annual meetings.

3. General extension activities were field days, Grassland Improvement Competition, Dairy Princess Competition, judging at fairs and 4-H shows, record analysis meetings with herd owners on the Provincial Cow Testing Service.

4. Purchase of 16 dairy bulls under the Cattle Improvement Policy.

COW TESTING

An all time record of 14,486 cows tested with an average production per cow of 10,455 pounds of milk and 371 pounds of butterfat highlighted the Cow Testing Service for 1962.

The 496 herds under test represented a net increase of 1,446 cows and 16 herds over 1961.

Sixty five new herds and 1,505 cows were placed under test, while 981 cows in 49 herds that were under test in 1961 discontinued during the year.

(a) Mail Order

This was the basic testing program offered to herd owners throughout the province. Milk samples lifted by the herd owners were sent by express or parcel post to one of the testing centres and tested by Dairy Branch officials. Milk from each cow was either weighed daily (Plan I) or weighed on one day a month (Plan II) by the herd owners.

The following table shows the number of herds and cows tested under the mail order system during the past three years.

	No. of Herds			No. of Cows		
	1960	1961	1962	1960	1961	1962
Plan I	95	104	97	1,807	2,194	2,217
Plan II	271	278	295	6,185	6,715	7,765
Total	366	382	392	7,992	8,709	9,982

From the table it can be seen that an additional 10 herds and 1,273 cows were tested under the mail order system during 1962 than in 1961.

(b) Owner-Sampler Route Plan

This program operated in the Edmonton area. It differs from the mail order system in that a full time fieldman visits each farm monthly picking up samples lifted by the herd owner and at the same time ear-tagging and identifying all heifer calves.

The following table shows the number of herds and cows tested under the owner-sampler route plan system during the past three years.

	No. of Herds			No. of Cows		
	1960	1961	1962	1960	1961	1962
Plan I	8	5	6	147	241	238
Plan II	86	93	99	2,555	2,890	4,266
Total	94	98	104	2,702	4,131	4,504

A total of 6 more herds and 373 more cows were tested under the owner-sampler route plan during 1962 than 1961.

A fieldman made 1,220 farm visits, ear-tagged 1,102 calves and maintained calf record books for 86 herd owners during 1962.

A total of 12 new herds were put under test in 1962 on the route plan.

TESTING CENTRES

Testing centres were in operation at the locations shown in the table below. A full time laboratory technician assisted by the fieldman did the testing at Edmonton. At the other centres the resident dairy inspector did the testing assisted by part time clerical help.

The following table shows the number of tests conducted at each centre during the past three years.

	TESTING CENTRES		
	1960	1961	1962
Edmonton	42,607	48,263	52,027
Ponoka	11,892	12,575	13,549
Red Deer	13,537	13,935	16,656
Calgary	7,473	9,658	9,862
Lethbridge	5,437	6,380	7,183
Fairview	2,196	2,349	2,515
Total	83,142	93,160	101,792

A total of 8,632 more tests were conducted in 1962 than in 1961.

The following table indicates the extent to which the two plans of testing were utilized by herd owners and shows the average production under each plan, together with the provincial average for all cows on test. Comparable figures for 1961 are shown in brackets.

SUMMARY

	Plan I*	Plan II**	Total
No. of herds under test	102 (109)	394 (371)	496 (480)
No. of cows under test	2,455 (2,435)	12,031 (10,605)	14,486 (13,040)
Average number of cows per herd	24.1 (22.3)	30.5 (28.6)	29.2 (27.8)
Number of cow years (T)	1,799 (1,762)	8,631 (7,861)	10,430 (9,622)
Average number of cow years per herd	17.6 (16.2)	21.9 (21.0)	21.0 (20.0)
Average production of milk (pounds)	9,932 (10,364)	10,564 (10,589)	10,455 (10,548)
Average production of butterfat (pounds)	366.7 (374.9)	371.4 (370.9)	370.6 (371.6)
Average Test (%)	— (—)	— (—)	3.54 (3.52)

* Plan I — Daily weighing and monthly tests.

** Plan II — Computed records from one day's weighing and monthly tests.

(T) Herd averages on the basis of cow years. The total number of cows on test during the year was used in determining the herd average, except where new cows were placed on test, or a cow was sold or died; in these cases only that part of the year in which she produced was used.

The average production of all cows on test showed a slight decrease of 93 pounds of milk and 1.0 pound of butterfat during the year 1962 compared to 1961.

REPORTS AND COMPETITIONS

1. Graded certificates of production were issued for all cows completing the necessary production and recording requirements.

2. Annual reports showing both total and average milk and butterfat production were sent to all herd owners as well as to district agriculturists' offices.

3. Honor Roll listing of all herds of 5 cows or more producing an average of over 400 pounds of butterfat was compiled. A total of 112 herds qualified in 1962 compared to 105 in 1961.

4. Higher production and herd improvement was encouraged through competitions.

LABORATORY SERVICE**GENERAL**

During 1962, the laboratory again experienced a further expansion in the services offered and in the variety of tests performed. A total of 40,383 samples were analyzed, involving in numerous cases as many as five tests per sample.

The growing public demand for a safer and higher quality product necessitated the adoption of new tests, new techniques and the acquisition of new equipment. Much emphasis was placed by the laboratory on the detection of various dairy product adulterants, such as antibiotics, pesticide residues and watering of milk.

The screening of dairy products for chlorinated hydrocarbon pesticides was continued with the financial assistance of the Federal Department of Health and Welfare and the Alberta Department of Public Health. In addition to dairy products, specimens such as meat, fowl and animal tissues, feeds and

rumen contents also were checked for pesticide residues on request.

A survey of fluid milk from the dairy herds throughout the province for evidence of Q-fever, and in some cases for Brucellosis was continued. However, as the control of Brucellosis has now come under the complete jurisdiction of the Federal Government, the detection of possible Brucella infections by the Ring Test has been discontinued at the laboratory.

The following table indicates the number and type of samples analyzed, corresponding figures from the previous year are included for comparison.

	1962	1961
Butter samples for mould and yeast	4,043	3,992
Butter samples for PH values	1,984	1,936
Bacterial creamery survey samples	91	41
Milk control service	13,113	11,097
Milk samples for Brucellosis	113	255
Milk samples for Q-fever	1,649	1,488
Mastitis control service	9,891	10,460
Milk samples for antibiotics	4,140	1,264
Cheese samples	71	114
Ice cream samples	655	627
Eggs and Egg products	412	361
Pesticides in dairy products	196	90
Water adulteration of milk	3,429	985
Miscellaneous	596	571
Total	40,383	33,281

BUTTER

Butter manufacture is an important part of the Alberta dairy industry, and it is vital that this product should maintain high standards to meet consumer demand and to compete with butter substitutes. To provide plant personnel with information regarding plant sanitation and quality of their products, the laboratory continued the mould and yeast and pH value determinations.

MILK

The bacteriological and chemical analyses of milk constituted the major portion of the laboratory activities. Analyses were carried out at least once a month on processed milk from almost every plant in the province, tests included total bacteria, coliform counts, butterfat content and phosphatase determination. On numerous occasions where plant difficulties were experienced, additional tests were performed. Milk derivatives such as chocolate drink, whipping, table and cereal cream, skim milk, buttermilk, etc. were also included in this testing program.

With the intensification by the local health units throughout the province to improve raw milk supplies, an appreciable number of raw milk samples were analyzed. It is gratifying to note that the quality of processed milk, as well as raw milk has shown a marked improvement, particularly in the remote rural areas.

MASTITIS

Mastitis is still one of the major problems of dairy farmers. This was evident by the number of samples submitted to the laboratory for detection of mastitis micro-organisms. The majority of samples were received either through veterinarians, public health or dairy inspectors, or the dairy farmers themselves.

The following table indicates the total samples tested, with the percentage of negative and positive samples, as compared with the 1961 figures.

Year	No. of Samples Tested	Positive Samples	Negative Samples
1962	9,891	50.2%	49.8%
1961	10,460	39.3%	60.7%

As most of the samples were received from herds experiencing some form of infection, the above figures cannot be considered representative of the province. However, the results indicate that a larger percentage of infections were detected in 1962.

It is interesting to note that while in previous years, the predominant infectious organisms were streptococci, in 1962 infections of staphylococcal origin exceeded those caused by streptococci.

ANTIBIOTICS

Laboratory findings indicate that some dairy producers continue to ship milk to plants too soon following the administration of antibiotics to infected animals. A more intensified program was conducted by the laboratory to check for the presence of antibiotic residues in fluid milk. Fortunately, the positive findings were not alarming as illustrated by the 1962 figures. Only 22 of 4,140 (0.53%) milk samples checked showed antibiotic residues.

CHEESE

Cheese samples, which also included cottage cheese, were examined primarily for total bacteria and coliform numbers, moisture and butterfat content, pH value, and in some cases for staphylococcal contamination.

ICE CREAM

The majority of ice cream samples were submitted by health inspectors from dairy plants and particularly from ice cream retail outlets. All samples were examined for total bacteria and coliform numbers, butterfat content and total solids.

EGG PRODUCTS

The bacteriological and chemical analyses of eggs and egg products were continued and a new service was introduced at the request of the poultry industry. This service provided information on the presence of *Salmonellae* (food poisoning organisms) in eggs and egg products which the processors required to comply with regulations of the Food and Drug Division. The Dairy Branch

Laboratory was the only place between Toronto and Vancouver where such tests were available to the industry.

WATER ADULTERATION OF MILK

A considerably higher number of milk samples were checked for water adulteration in 1962 than in the previous year. It is significant that the positive findings in 1962 were far below those of 1961. This can be explained by the fact that 1961 was the first year that water adulteration tests were introduced.

MISCELLANEOUS

A great variety of samples and tests performed were included in this group. Such samples as water, brine, chlorine and detergent solutions, dry milk powder, margarine, goat milk, evaporated milk, meat, etc. were received. In addition to routine bacteriological and chemical analyses, such tests as salt and carotene determinations, chemical adulteration, organoleptical examination, and others were involved.

FROZEN FOOD LOCKER PLANTS

The administration of the Frozen Food Locker Act including regular inspections of plants, and instruction on preparing, processing and freezing products for storage was carried out by eleven inspectors under the direction of a supervisor. A total of 974 regular inspections were made during the year with the supervisor visiting every plant at least once.

Ten plants discontinued renting lockers during the year. These were located at Alix, Andrew, Barnwell, Blackie, Camrose, Champion, Carmanagay, Carsland, St. Paul and Wetaskiwin. The plants at Carsland and Blackie were small sub plants offering only low temperature storage. The plants at Barnwell, Carmanagay and Alix continued to operate as retail meat markets and processing plants which do not require a license under the Act. New plants at St. Paul and Camrose are being established to offer home freezer customers services in slaughtering, processing, curing and freezing. The locker plant at Burdette was closed for a few months but opened under new management in October. There were 121 locker plants and 3 animal food storage plants licensed and in operation at the year end. The Canyon Creek Cold Storage Limited increased the capacity of their plant considerably by purchasing and putting into operation a fish processing plant that had not operated for about two years. The Fur Farmers Co-op. Association at Jousard improved the efficiency of their plant by installing fully automatic controls to their refrigeration equipment.

The scoring of all plants for the Merit Award Competition and for Proficiency Certificates was again done by Branch inspectors while the top plants in each inspector's district were rescored by officials from head office. Winners of the 1961 competition were announced at the Convention of the Alberta Quick Freeze Locker Association held at Red Deer during February with the winners receiving trophies and certificates. The shield for Sec-

tion A (plants with over 300 lockers) was won by Redi Food "N" Freezers at Edmonton; Central Alberta Dairy Pool at Rimbey and Hanna Co-op. Locker Plant at Hanna placed second and third respectively. Section B (plants with less than 300 lockers) was won by Olson and Sons of Sexsmith; with Denoon's Meat Market and Locker Plant of Nanton placing second and Hythe Locker Plant at Hythe placing third.

Proficiency Certificates prepared by the Dairy Branch, were presented to 33 operators for plants that offered a high standard of service, sanitary facilities and efficient operations.

The following statistics have been tabulated from the monthly storage reports received from plant operators during the 12 month period ending November 30, 1962. Similar statistics for the previous year are shown for comparison.

LOCKER PLANT OPERATIONS

	1962	1961
No. of animal food plants	3	3
No. of plants in operation December 1st	121	131
No. of plants reporting	130	137
No. of lockers installed	29,770	34,125
Average number of lockers installed	250	260
No. of lockers rented December 1st	20,305	23,881
Percentage of lockers rented December 1st	68.5	69.9
Average lbs. of food stored per locker with complete service	285.4	321.1
Average lbs. of food stored per locker with incomplete service	157.1	167.0
Average poundage per locker — all plants	269.5	304.4
Average lbs. per locker on the basis of lockers rented for 12 months	289.5	292.9
Inspections during the year	974	1,030

Locker rentals and products stored in lockers again showed a decline during the past year and as in former years the decline was due mainly to the increased use of home freezers.

The trend in the locker plant industry is illustrated by the following tables which show the number of plants operating, lockers rented, the amount and kind of food stored in lockers and the amount and kind of food processed for home freezers; for several years. It will be noted that the volume stored in lockers decreased rapidly since 1955 whereas the amount processed for home freezers has shown corresponding gains.

LOCKER PLANT OPERATIONS

Year	No. of Plants Operating	No. of Lockers Installed	No. of Lockers Rented	Per Cent of Lockers Rented	Average lbs. Per Rented Locker
1945	61	16,770	13,572	80.9	326.0
1950	141	48,647	43,802	90.0	305.2
1955	153	51,488	43,608	84.7	307.9
1960	136	37,646	26,316	69.9	329.6
1961	131	34,125	23,881	69.9	292.9
1962	121	29,770	20,305	68.5	289.5

AMOUNT AND TYPE OF FOOD PRODUCTS STORED IN LOCKERS

Year	Pounds Stored Lockers	Meat %	Fish %	Poultry %	Game Birds %	Big Game %	Cured Meats %	Lard %	Fruits %	Veg. %	Misc. %
1945	3,902,294	79.1	.8	6.4	.7	1.5	7.3	.5	1.9	1.7	.1
1950	12,895,363	75.3	.9	6.3	.6	.9	11.0	1.2	1.5	1.5	.8
1955	13,760,124	79.1	.4	6.8	.5	1.7	7.6	1.0	.6	1.8	.5
1960	8,675,136	77.0	.3	4.7	.2	4.9	9.4	1.1	.5	1.5	.4
1961	7,100,549	76.0	.3	5.1	.3	6.1	8.6	1.1	.5	1.6	.4
1962	5,546,899	73.7	.3	5.9	.2	6.4	9.3	1.3	.6	1.8	.5

Processed for Home Freezers

1953	1,534,919	76.5	1.2	1.3	.1	.1	4.0	.3	4.5	5.4	6.6
1955	2,021,656	76.0	1.0	1.6	.1	.6	6.3	.5	5.1	4.7	4.1
1960	9,834,111	78.5	.5	1.1	.1	2.0	9.8	1.3	2.5	2.2	2.0
1961	10,158,455	79.5	.4	1.2	.5	2.5	8.6	1.2	1.5	2.3	2.3
1962	10,463,546	80.0	.5	1.0	.1	2.4	9.2	1.2	1.9	2.3	1.4

TOTAL VOLUME PROCESSED FOR LOCKERS AND HOME FREEZERS

	Pounds		Pounds
1953	17,317,103	1960	18,509,247
1955	15,781,780	1961	17,259,004
		1962	16,010,445

Milk Control Report

Submitted By The

PUBLIC UTILITIES BOARD

J. B. MOORE, Administrator of Milk Control

Fluid milk consumption during 1962 continued to increase in the controlled areas of Calgary, Camrose, Edmonton, Medicine Hat, Ponoka and Red Deer. Consumption declined in the areas of Crow's Nest Pass and Lethbridge.

Increases or decreases were as follows:

Calgary	+ 6.0%	Camrose	+1.9%
Crow's Nest Pass	—11.3%	Edmonton	+1.6%
Lethbridge	— 4.4%	Medicine Hat	+2.6%
Ponoka	+10.8%	Red Deer	+6.5%

However per capita consumption continued the general downward trend in all but one of the areas. Medicine Hat showed per capita increases each month during 1962.

Production declined in the four areas of Calgary, Camrose, Edmonton and Medicine Hat, with other areas registering increases.

The number of licensed distributors at year's end was twenty-one, a decrease of one. Licensed milk producers numbered 828, table cream producers numbered 91. Milk producers declined by 72. The largest drop occurred in Calgary with 53 and Edmonton with 14, the Calgary decrease being due largely to 100% change-over to bulk tank delivery.

Milk Control Regulations were amended by Alberta Regulation 343/62. Four Orders were issued during the year as follows: Orders Nos. 25954, 25969, 26009 and 26014.

One application for the institution of control was made. The Board after investigation refused to act upon the application.

The Board continued its active and financial support of both the Dairy Cost Survey and the several Milk Foundations. Several investigations were made into alleged infractions.

The Board was represented at the Western Milk Board Convention held in Vancouver and took part in several other meetings during the year.

STATISTICAL DATA RELATING TO MILK CONTROL

The Tables which follow relate to milk and cream supplied and sold for fluid consumption in the areas of the Province controlled by the Public Utilities Board during the year 1962.

TABLE I
DAILY PER CAPITA CONSUMPTION OF FLUID MILK, IN PINTS, BY MONTHS FOR 1962*
(To Include Cream Consumption Converted to Milk Equivalent)

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	.686	.709	.734	.679	.688	.695	.624	.635	.670	.682	.685	.661
Camrose	.728	.754	.824	.717	.727	.731	.657	.682	.737	.765	.790	.788
Crow's Nest Pass	.413	.428	.422	.409	.459	.469	.419	.411	.406	.391	.395	.405
Edmonton	.747	.782	.819	.746	.761	.775	.672	.686	.747	.770	.752	.767
Lethbridge	.646	.674	.602	.632	.639	.655	.595	.614	.642	.651	.641	.644
Medicine Hat	.532	.536	.563	.535	.545	.557	.522	.540	.554	.575	.564	.560
Ponoka	.743	.766	.769	.729	.742	.777	.592	.708	.702	.780	.750	.770
Red Deer	.673	.696	.736	.701	.721	.734	.665	.675	.696	.726	.735	.727

* Not to include Chocolate, Buttermilk and Skim Milk

TABLE II
CONSUMPTION OF FLUID MILK MONTHLY, 1962—IN QUARTS

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	2,232,283	2,070,430	2,367,436	2,128,802	2,263,474	2,175,859	2,024,554	2,075,039	2,162,571	2,260,210	2,221,167	2,225,360
Camrose	67,641	63,361	72,763	63,538	66,870	64,431	59,605	61,883	65,600	70,491	70,799	70,650
Crow's Nest Pass	42,874	40,091	45,778	41,193	42,077	41,294	37,503	40,853	39,499	41,366	40,468	40,660
Edmonton	2,824,986	2,657,694	3,079,160	2,703,515	2,842,667	2,794,824	2,477,017	2,520,198	2,726,641	2,891,968	2,834,611	2,872,265
Lethbridge	275,297	263,877	286,652	265,407	277,790	273,605	256,670	267,135	269,704	280,513	268,651	273,960
Medicine Hat	160,113	146,230	167,575	155,219	162,415	160,552	155,878	162,569	161,807	173,501	163,266	162,410
Ponoka	39,443	36,470	39,918	36,730	38,494	38,359	32,447	35,269	37,377	40,724	37,772	38,624
Red Deer	178,064	165,035	193,800	175,482	188,828	184,823	173,315	177,787	180,910	188,480	189,993	190,100

TABLE III
CONSUMPTION OF 2% PARTLY SKIMMED MILK MONTHLY, 1962—IN QUARTS

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	251,846	235,315	271,849	248,573	267,585	260,022	243,686	251,264	273,719	293,242	295,705	296,300
Camrose	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crow's Nest Pass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edmonton	233,632	235,224	276,231	240,469	252,346	251,238	207,162	216,577	256,113	279,213	283,421	281,642
Lethbridge	36,561	34,688	38,444	34,710	37,066	35,070	33,897	34,651	36,580	38,011	40,648	39,010
Medicine Hat	16,886	15,083	16,948	15,119	15,517	14,745	13,738	15,341	15,431	16,672	15,927	15,723
Ponoka	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Deer	27,225	25,801	29,321	27,456	29,344	29,870	27,313	28,217	28,495	29,388	35,143	35,550

TABLE IV
CONSUMPTION OF SKIMMILK MONTHLY, 1962—IN QUARTS

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	107,732	100,354	117,240	110,259	112,889	109,946	91,386	95,052	106,553	113,859	110,432	112,400
Camrose	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crow's Nest Pass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edmonton	117,930	111,047	129,280	114,242	120,609	116,843	92,835	95,871	108,990	117,554	118,308	116,123
Lethbridge	10,937	10,127	11,584	10,316	11,295	10,928	9,329	10,503	10,241	11,113	10,400	9,940
Medicine Hat	2,129	2,011	2,141	1,901	2,310	2,198	2,033	1,860	2,124	2,415	2,258	2,186
Ponoka	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Deer	11,574	10,815	13,147	11,800	12,977	12,200	10,589	11,094	12,386	12,747	12,759	11,500

TABLE V
CONSUMPTION OF CHOCOLATE DAIRY DRINK MONTHLY, 1962—IN QUARTS

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	76,185	70,863	80,387	30,050	82,299	86,564	89,080	92,932	88,070	92,342	82,955	78,200
Camrose	1,818	1,586	2,105	2,203	2,268	2,629	2,555	2,974	2,662	2,734	2,491	2,612
Crow's Nest Pass	---	---	---	500	3,178	3,214	2,791	2,849	2,043	1,499	203	127
Edmonton	110,221	106,012	124,847	110,971	121,137	124,139	118,305	122,868	130,039	135,384	127,381	119,764
Lethbridge	9,323	8,962	9,795	9,622	10,575	12,112	12,774	13,283	10,746	10,985	9,613	9,415
Medicine Hat	7,939	7,173	8,555	8,640	8,716	10,031	9,523	9,512	8,391	8,850	8,139	8,880
Ponoka	180	132	165	22	1,140	1,856	1,739	1,823	489	15	280	310
Red Deer	6,988	6,986	8,315	8,520	9,048	9,609	9,708	10,368	9,349	9,213	8,605	8,350

TABLE VI
CONSUMPTION OF BUTTERMILK MONTHLY, 1962—IN QUARTS

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	25,510	24,096	30,504	34,000	31,654	37,720	38,411	37,892	28,378	29,702	24,125	23,500
Camrose	641	641	825	768	881	1,111	976	998	825	824	735	766
Crow's Nest Pass	84	302	353	332	373	364	337	420	357	313	278	192
Edmonton	37,517	39,386	51,086	47,266	53,759	64,446	59,463	55,400	43,941	42,028	38,943	36,351
Lethbridge	3,562	3,896	5,548	5,307	5,387	6,813	6,673	6,137	4,442	4,026	3,664	3,420
Medicine Hat	1,660	1,683	2,274	2,437	2,696	4,009	3,971	3,699	2,106	2,109	1,420	1,478
Ponoka	106	113	145	164	163	247	186	223	511	168	109	80
Red Deer	1,546	1,359	1,907	1,777	2,036	2,311	2,296	2,309	1,801	1,709	1,718	1,670

TABLE VII
CONSUMPTION OF FLUID CREAM MONTHLY, 1962—IN QUARTS

Area	January	February	March	April	May	June	July	August	September	October	November	December
Calgary	156,127	146,927	169,239	151,048	162,390	157,798	150,789	152,589	149,157	162,470	156,025	153,650
Camrose	2,499	2,339	3,330	2,603	2,759	2,831	2,632	2,852	2,858	3,021	2,977	3,104
Crow's Nest Pass	431	304	410	596	1,302	1,317	1,270	792	710	473	470	727
Edmonton	224,418	212,994	245,820	219,314	230,835	228,098	212,062	219,001	217,150	232,229	234,559	237,128
Lethbridge	19,663	18,944	19,522	19,036	20,118	19,784	18,200	18,475	19,348	20,383	19,509	20,550
Medicine Hat	10,580	9,239	11,550	10,281	11,036	10,777	10,635	10,716	10,653	11,329	11,102	11,720
Ponoka	2,390	2,275	2,691	2,396	2,487	2,721	2,315	2,755	2,608	2,789	2,628	2,720
Red Deer	10,195	9,686	11,181	10,874	11,027	10,880	10,315	10,950	10,748	11,772	10,915	10,910

TABLE VIII
FLUID MILK CONSUMPTION, 1958 - 1962—IN QUARTS

Area	1958	1959	1960	1961	1962
Calgary	22,549,934	23,528,082	24,771,866	24,722,487	26,207,185
Camrose	773,446	746,870	781,018	782,628	797,632
Crow's Nest Pass	541,477	451,839	571,087	556,297	493,656
Edmonton	31,032,352	31,632,619	32,175,479	32,717,544	33,225,546
Lethbridge	8,312,685	8,333,543	8,412,623	8,408,741	8,259,261
Medicine Hat	1,834,818	1,943,425	1,870,094	1,882,136	1,931,535
Ponoka	365,698	409,380	441,296	407,361	451,627
Red Deer	1,714,424	1,870,971	1,922,574	2,052,334	2,186,617
TOTAL	62,124,834	63,916,729	65,946,037	66,529,528	68,558,059

TABLE II
FLUID CREAM CONSUMPTION, 1958 - 1962—IN QUARTS

Area	1958	1959	1960	1961	1962
Calgary	1,744,239	1,823,919	1,859,491	1,835,371	1,868,209
Camrose	23,908	24,860	29,427	31,715	33,805
Crow's Nest Pass	5,060	8,547	4,149	4,589	8,802
Edmonton	2,398,238	2,507,060	2,577,486	2,615,477	2,713,408
Lethbridge	224,967	230,727	234,731	229,285	233,482
Medicine Hat	112,203	115,407	120,574	119,378	129,618
Ponoka	22,324	25,430	30,914	27,285	30,775
Red Deer	96,147	99,090	107,295	115,495	129,453
TOTAL in Quarts	4,627,086	4,830,040	4,964,067	4,978,590	5,147,552
TOTAL in B.F. Equivalent - Lbs.	1,492,224	1,556,480	1,675,372	1,680,274	1,711,561

TABLE X
FLUID MILK PURCHASES BY DISTRIBUTING PLANTS—1958 TO 1962—IN POUNDS

Area	1958	1959	1960	1961	1962
Calgary	87,147,886	94,941,664	102,916,732	107,131,175	106,037,098
Camrose	2,676,388	2,486,465	2,911,309	2,978,372	2,706,404
Crow's Nest Pass	1,098,425	1,154,268	1,217,513	1,373,700	1,429,400
Edmonton	127,681,837	134,265,800	141,427,090	147,697,071	145,051,248
Le'hbridge	17,507,666	21,451,338	24,499,323	25,274,500	25,549,300
Medicine Hat	6,546,699	7,139,217	7,862,646	8,110,100	7,944,300
Ponoka	1,232,693	1,383,920	1,437,490	1,359,758	1,675,308
Red Deer	6,125,997	7,047,283	7,688,980	8,310,071	8,533,444
TOTAL Pounds	250,017,591	269,869,955	289,961,533	302,234,747	298,926,502

TABLE XI
NUMBER OF MILK AND CREAM PRODUCERS AND DISTRIBUTORS
OPERATING ON DECEMBER 31st, 1962, UNDER
THE PUBLIC UTILITIES BOARD LICENSE

Area	Milk		Cream		TOTAL	
	Producers	Distributors	Producers	Distributors	Producers	Distributors
Bowden	1	1	—	—	1	1
Calgary	277	5	8	—	285	5
Camrose	6	2	—	—	6	2
Crow's Nest Pass	8	1	—	—	8	1
Edmonton	443	4	55	—	498	4
Lethbridge	45	2	20	—	65	2
Medicine Hat	26	2	—	—	26	2
Ponoka	5	1	2	—	7	1
Red Deer	17	3	6	—	23	3
—	—	—	—	—	—	—
TOTAL	828	21	91	—	919	21

TABLE XII
PRICES IN EFFECT AS AT DECEMBER 31st, 1962

Area	Milk		To Consumers		10% Substandard		18% Table Cream		32-34% Whipping		Chocolate		Butter		Skim Milk	
	To Producers per 100 lbs. 3.5% B.F.	per quart	per quart	per pint	per pint	per pint	per pint	per half pint	per quart	per quart	per quart	per quart	per quart	per quart	per quart	per quart
Bowden	\$4.56	.19c	.22	.24c	—	43c	—	.27c	.23c	—	—	—	—	.21c	.17c	—
Calgary	4.89	.22	.19	.24	.30	—	.32	.30	.21	.21	.21	.21	.21	.21	—	—
Camrose	4.43	.24	.24	.30	.40	—	.30	.25	.24	.24	.24	.24	.24	.24	—	—
Crow's Nest Pass	5.25	.21	.21	.24	.40	—	.30	.23	.23	.23	.23	.23	.23	.23	.16	.16
Edmon'on	4.95	.22	.22	.24	.33	—	.33	.23	.23	.23	.23	.23	.23	.23	.17	.17
Lethbridge	4.89	.22	.22	.24	.30	—	.30	.22	.22	.22	.22	.22	.22	.22	—	—
Medicine Hat	4.84	.22	.22	.24	.30	—	.30	.22	.22	.22	.22	.22	.22	.22	.17	.17
Ponoka	4.75	.20	.20	.24	.30	—	.30	.22	.22	.22	.22	.22	.22	.22	—	—
Red Deer	4.95	.22	.22	.25	.32	—	.32	.24	.24	.24	.24	.24	.24	.24	.17	.17

Milk to consumer per quart price refers to an imperial quart of "Standard" Milk delivered to "Retail Consumer."

December figures are estimates.

TABLE XIII
CONSUMER AND PRODUCER PRICES IN EFFECT IN SPECIFIED CITIES ACROSS CANADA
(as at November 1st, 1962)

	Consumer Prices Homogenized Milk—Quart		Producer Prices—Cwt. B.F. Basis	Differential
Charlottetown	21c	\$4.42	3.6%	6c
Halifax	24	5.33	3.7	3
Sydney	24	5.64	3.7	3
St. John	23	5.15	3.8	3
Montreal	22½	4.89	3.4	5
Quebec	21	4.78	3.4	5
Toronto	25	5.10	3.4	5
Winnipeg	24*	4.90†	3.5	5
Regina	23	5.10	3.5	5
Edmonton	22	4.95	3.5	5
Calgary	22½	4.89	3.5	5
Vancouver	25	6.13	4.0	7.6

■ Maximum

† Plus 10c for Grades 1 and 2.

Report of the Poultry Branch

Robt. H. McMILLAN, Poultry Commissioner

G. R. MILNE, Poultry Supervisor

Inspectors:

K. Darlington	West Edmonton	J. L. Plumley	Red Deer
K. H. Rowe	East Edmonton	Wm. Hutchison	Calgary
G. O. Johnson	Camrose	G. E. Patsula	Fairview

GENERAL REVIEW

Total volume of production in all three phases of the poultry production industry—commercial egg, broiler, and turkey—was reduced from that of 1961 while returns were comparable or slightly greater. Total egg production, an estimated 40 million dozen compared to 41.3 million dozen in 1961, was sufficient to satisfy Alberta's requirements even though seasonal surpluses and deficiencies occurred. These were an estimated 40,498,000 layers with an average of 180 eggs per bird produced.

Total Eggs produced—millions of dozens	Weighted Egg Prices to Producers ■ determined by Registered Egg Station Receipts Alberta	
1958	47.6	25.6
1959	44.7	25.2
1960	44.0	23.2
1961	41.3	24.4
1962	40.0	25.0

The Federal Government under the Agricultural Stabilization Board continued its deficiency Payment Program at a support price of 34 cents a dozen on Grade A extra large, large and medium sized eggs up to a maximum total of 4,000 dozen to an individual producer. A deficiency payment of 1c per dozen was made in 1962.

Chicken broiler production was slightly reduced from that of 1961 resulting in a stronger and more stable market for the last three quarters of 1962. The unabated expansion of the broiler industry evident up to 1961 was halted and production was more closely in attune with market requirements. Many small independent or sideline operations were eliminated and several large production units reduced their output. The low returns to broiler growers in 1961 together with the increase in feed costs caused a severe cut-back (20%) in broiler hatching egg supplies which in itself contributed to firming of the market. Returns to producers were an estimated 4-5c per pound stronger in 1962 compared to 1961.

Turkey meat handled through registered stations were estimated at 12.5 million pounds compared to 14.5 million pounds in 1961, a reduction of 10%. Uncertainty in regard to the feed situation and in available grower financing were important deterrents to poult production in early 1962. For the first time in 4 years returns to producers were stronger on the Thanksgiving market than the Christmas market. Producer marketing at Thanksgiving received an estimated 5c per pound more for their

product than in 1961 while those marketing at Christmas received about the same as 1961. Thanksgiving marketings were about 40% of the total marketed for the year. The support price program and import quotas for turkey meat continued in 1962. Dealers and growers could offer to the Agricultural Stabilization Board Grade A turkeys eviscerated at the end of the year on the basis of 20c per pound live weight, Toronto. No offerings were made. Total imports from the United States permissible were not brought in during 1962 in part because of the Canadian dollar devaluation.

Chicken broiler production and turkey production continued to be to a large extent dependent upon contracts and financing programs.

FLOCK APPROVAL

The pullorum testing and banding of chicken and turkey hatching egg supply flocks continues to be a major project of the Poultry Branch. To handle the bulk of this work eight temporary inspectors were employed from September through December. Tables 1 and 2 indicate the number of flocks and birds inspected monthly throughout the year.

TABLE 1
FLOCKS AND FEMALES TESTED
ALBERTA

() Flocks.

EGG REPLACEMENT

	1958		1959		1960		1961		1962	
Jan.	4,991		6,342		8,857		5,595		14,846	
Feb.	264		1,868		378		184		2,517	
March	0		0		0		350		381	
Q.T.	(17)	5,255	(19)	8,210	(28)	9,235	(17)	6,129	(48)	17,746
April	0		0		0		236		521	
May	2,298		0		0		0		842	
June	563		0		537		0		0	
Q.T.	(3)	2,861	(0)	0	(2)	537	(1)	236	(2)	1,363
July	0		0		314		0		0	
Aug.	9,138		6,176		7,384		6,190		5,806	
Sept.	79,852		45,628		40,833		36,229		28,904	
Q.T.	(235)	88,990	(135)	51,804	(103)	48,531	(80)	42,419	(72)	34,710
Oct.	107,197		89,695		60,487		62,690		57,918	
Nov.	72,479		65,932		83,360		43,186		44,643	
Dec.	30,463		50,191		38,498		36,144		22,896	
Q.T.	(637)	210,139	(513)	205,818	(465)	182,345	(353)	142,020	(284)	125,457
Year T.	(892)	307,245	(667)	265,832	(598)	240,648	(451)	190,804	(406)	179,276
Change			(-225)	-41,413	(-69)	-25,184	(-147)	-49,844	(-45)	-11,528
Ave. flock size	344		398		402		423		441	

TABLE 11
FLOCKS AND FEMALES TESTED
ALBERTA

BROILER										
	1958		1959		1960		1961		1962	
Jan.	7,558		6,545		9,640		5,698		18,170	
Feb.	2,816		4,179		3,116		11,565		18,198	
March	142		2,554		2,524		7,235		7,700	
Q.T.	(27 flocks)	10,516	(26 flocks)	13,278	(25 flocks)	15,280	(37 flocks)	24,498	(73 flocks)	44,068
April	1,755		5,962		1,287		14,735		3,774	
May	337		6,591		7,401		8,357		3,674	
June	794		3,874		2,796		5,103		6,383	
Q.T.	(8 flocks)	2,886	(26 flocks)	16,427	(18 flocks)	11,484	(36 flocks)	28,195	(22 flocks)	13,831
July	4,081		11,066		6,236		12,325		1,887	
Aug.	9,721		4,793		6,858		9,674		11,169	
Sept.	8,137		14,006		17,525		20,828		14,895	
Q.T.	(43 flocks)	21,939	(54 flocks)	29,835	(61 flocks)	30,619	(73 flocks)	42,827	(45 flocks)	27,951
Oct.	4,131		13,394		15,685		17,251		15,460	
Nov.	6,581		10,346		6,195		21,195		11,713	
Dec.	3,948		11,318		13,565		15,709		10,506	
Q.T.	(35 flocks)	14,660	(75 flocks)	35,058	(77 flocks)	35,445	(110 flocks)	54,155	(84 flocks)	37,679
Year Total	(113 flocks)	50,001	(181 flocks)	94,598	(181 flocks)	92,828	(256 flocks)	149,675	(224 flocks)	123,529
Change			(+68)	+44,597	(0)	-1,770	(+75)	+56,847	(-32)	-26,146
Ave. flock size		442		522		512		584		551

All hatching eggs set in licensed hatcheries must be from inspected and pullorum disease free flocks.

Table III summarizes the number of flocks and birds inspected and tested for pullorum disease.

TABLE III
SUMMARY OF FLOCK APPROVAL 1961-1962
(First Test on Completed Flocks)

Year	Method of Testing	No. of Flocks	No. of Birds	Ave. Size of Flock	% Reaction
1961	Whole Blood	707	340,479	482	.029
1962	Whole Blood	655	335,064	512	.015

Table IV summarizes total turkey flocks and turkeys inspected and banded.

TABLE IV
SUMMARY OF TURKEY APPROVAL 1960-1962

Year	No. of Flocks	No. of Birds	Average Size of Flock
1960	44	45,489	1,034
1961	35	44,511	1,272
1962	36	55,354	1,537

79% of the turkeys were Broad Breasted Bronze, 16% were large Whites, and 5% were small Whites.

The number of flocks inspected was comparable to the previous year, while the number of birds inspected increased by 11,000. This was undoubtedly due as a result of the devaluation of the Canadian dollar thus reducing imports from the United States.

LICENSING AND BONDING OF DEALERS IN POULTRY AND POULTRY PRODUCTS

A. Produce — The Poultry Branch administered Regulations respecting the Licensing and Bonding of Dealers in Poultry and Poultry Products under the Livestock and Livestock Products Act. Every person carrying on a business as a dealer must obtain a license to conduct such business. As of January 1, 1956, as protection to producers, all wholesale dealers were required to furnish a surety bond in favor of the Minister ranging from \$1,000.00 to \$10,000.00 dependent upon the volume of business conducted.

"One produce dealers' bond was called in for its total value of \$10,000.00. As this represented only slightly more than one-half of the liabilities to producers for product sold to the dealer, settlement was made at 0.5511c on the dollar."

TABLE V

Year	First Receivers	Reg. Egg Grading Stations	Reg. Poultry Processing Stations	Reg. Poultry Eviscerating Stations	Reg. Poultry Grading Stations	Temporary Grading Stations	Poultry Packing Stations
1958	21	144	24	10	9	3	—
1959	17	142	26	12	8	3	—
1960	17	137	23	13	8	6	—
1961	10	136	23	14	9	5	5
1962	12	125	19	11	8	0	5

B. Hatchery — The Poultry Branch administered Regulations respecting the Production and Sale of Chicks under the Alberta Livestock and Livestock Products Act. All commercial and custom hatcheries with an incubator capacity of 1,000 eggs or more were licensed. Commercial hatcheries were required to furnish a surety bond, in favor of the Minister, for protection of hatching egg producers, ranging from \$2,000.00 to \$5,000.00 dependent upon incubator capacity.

"A continued reduction in numbers of commercial hatcheries operating was noted although total egg setting capacity for the Province was not greatly reduced."

TABLE VI
DEVELOPMENT OF HATCHERIES

Year	Breeder Hatcheries	Commercial Hatcheries	Egg Setting Capacity
1958	10	50	4,614,423
1959	8	50	4,807,462
1960	6	47	4,684,062
1961	10	43	4,658,339
1962	10	44	4,771,767

TABLE VII
CHICK DISPOSITION

Year	% Hatchability	Chicks Hatched	Chicks Not Sold	Chicks Exported	Chicks Imported	Chicks Remaining in Province
1958	69.8	11,454,597	727,795	581,018	310,951	10,456,735
1959	70.9	11,710,464	613,173	600,475	474,379	10,971,195
1960	69.4	12,358,830	739,453	525,186	470,192	11,564,383
1961	70.0	14,544,564	679,377	621,299	503,550	13,734,058
1962	70.1	13,084,102	881,652	598,122	569,273	12,173,601

TABLE VIII
CHICK PRODUCTION BY TYPE

For Egg Production	Type	%	For Broiler Production	Type	% Change
1962	1961		1962	1961	
5,992,899	7,276,258	-18	7,091,203	7,268,306	-25

Poultry production in Alberta hatcheries in 1962 was 1,375,515 poults, a decrease of 19% over 1961.

TABLE IX
POULT PRODUCTION

Year	Eggs Set	Eggs Imported	Poults Hatched	% Hatchability	Poults Imported	Poults Exported	Poults on Alberta Farms
1958	2,011,546	924,591	1,162,178	58.8	43,515	90,564	1,115,129
1959	2,593,650	1,222,124	1,470,164	56.6	166,571	13,750	1,622,985
1960	2,184,672	500,100	1,211,030	55.4	29,482	134,211	1,106,301
1961	3,187,674	1,005,489	1,708,081	53.5	46,804	196,860	1,558,025
1962	2,667,391	64,600	1,375,515	51.3	14,040	41,944	1,347,611

Importation of U.S. franchise breeding stock is decreasing. This past season there were 23 different franchises offered for sale as compared to 19 in 1961, 23 in 1960, and 25 in 1959. It is estimated that this stock produced 4,135,100 egg production chicks and 6,736,642 broiler production chicks and 1,031,636 poults this year. There are 5 Canadian franchised chicks offered for sale in the Province.

TABLE X
IMPORTATION FROM THE UNITED STATES—1962

	CHICKEN				TURKEY			
	From Egg Production		From Broiler Production		From Meat Production		From Broiler Production	
	Matings		Matings		Matings		Matings	
	Eggs	Chicks	Eggs	Chicks	Eggs	Poults	Eggs	Poults
January	720	4,632	—	8,657	82,200	—	400	—
February	900	11,050	—	12,200	100,800	7,200	—	—
March	15,390	12,995	23,786	13,494	118,600	12,680	—	—
April	6,640	12,826	18,648	17,595	146,889	—	3,600	—
May	720	3,872	14,400	8,075	56,930	5,150	12,000	—
June	720	1,350	37,440	9,523	4,400	14,128	—	—
July	720	—	16,052	13,423	—	2,700	4,000	—
August	720	—	—	7,012	—	—	16,000	—
September	540	1,650	1,800	2,659	—	—	—	—
October	—	—	19,022	1,202	—	—	—	—
November	360	—	—	5,148	—	—	3,200	—
December	720	—	43,200	26,003	—	—	—	—
TOTAL	28,150	48,375	174,348	124,991	509,819	41,858	39,200	—

THE POULTRY INDUSTRY

Egg marketings at registered egg grading stations are indicated in Table XI. These receipts represent about 40% of the total production, the balance being sold direct by the producer,

farm consumed or used for hatching purposes. Weighted egg prices to producers increased 0.5 cents per dozen over 1961.

TABLE XI

	Egg Receipts at Registered Egg Grading Stations (30 dozen cases)	Weighted Egg Price to Producers by Grade per Dozen
1958	652,180	25.6 cents
1959	563,471	24.7 cents
1960	497,537	23.2 cents
1961	484,906	24.4 cents
1962	470,641	25.0 cents

TABLE XII

POULTRY EVISCERATED IN REGISTERED STATIONS

(Pounds)

Year	Chickens		Fowl	Ducks
	Under 8 lb.	Over 8 lb.		
1958	3,821,000	1,245,000	2,312,000	25,000
1959	5,628,526	1,134,345	2,059,150	29,810
1960	7,807,623	848,534	2,053,831	33,507
1961	14,121,713	1,372,489	2,334,092	5,348
1962	14,031,000	870,000	2,185,000	5,000

Year	Turkeys			Total	Geese
	Under 8 lb.	8 to 16 lb.	Over 16 lb.		
1958	---	---	---	7,481,000	294,000
1959	---	---	---	8,722,805	313,158
1960	---	---	---	9,167,814	418,787
1961	337,973	7,109,576	7,106,494	14,554,043	556,451
1962	492,000	4,352,000	7,328,000	12,172,000	470,000

The laying hen numbers and market turkey numbers on Alberta farms is indicated in Table XIII.

TABLE XIII

FARM POPULATION

Year	Laying Birds	Turkeys
1958 (D.B.S.)	3,010,000	975,000
1959	2,925,000	1,056,000
1960	2,825,000	975,000
1961	2,730,000	1,184,000
1962		820,000

ALBERTA RANDOM SAMPLE TEST

The Alberta Random Sample Test was established at Oliver in 1957. This test has been serving a valuable function in assessing the progress of Alberta breeders relative to those in other provinces and the United States, and in assisting commercial chick buyers in determining the merits of available stocks. It is the only Test in Canada operated successfully wholly without technical assistance from Universities or Ph.D. personnel.

The 5th Test, of 500 days duration, consisted of entries from eleven different egg production strains. All factors of economic importance were evaluated for each strain and compared one against the other.

Improved breeding techniques were evidenced by the increase in performance level in the five completed tests. In addition to the increase in the average performances level, a narrowing of the variation between entries in each successive Test was noted. The following table compares average egg production and average laying house mortality for the five completed Tests:

Year	Egg Production per Hen Housed	Laying House Mortality
First	201.2	14.8%
Second	219.7	10.7%
Third	213.8	9.0%
Fourth	229.3	6.6%
Fifth	226.0	5.4%

The Fifth Test again demonstrated that Alberta breeders have stock equal or superior to imported competition. An Alberta breeder led the first Test, two Alberta breeders the third Test, one Alberta breeder the fourth Test, and one Alberta breeder the fifth Test.

The following table indicates the performance of the entries in the fifth Test in some of the economic factors tested for:

TABLE XIV
FIFTH ALBERTA RANDOM SAMPLE TEST

Entrant	Egg Prod. Per Hen Housed	% Grade A Large Eggs	% Laying House Mortality	Lbs. Feed per Dozen Eggs	Net Income Per Hen Housed
1	217.1	43.9	5.0	4.9	\$1.48
2	248.9	66.8	7.0	4.8	2.35
3	200.5	55.1	5.0	5.8	1.00
4	221.8	68.1	6.0	4.9	2.04
5	234.0	61.6	3.0	4.9	2.05
6	241.7	59.7	5.0	4.5	2.41
7	211.0	64.2	8.0	6.4	0.99
8	233.4	63.2	4.0	4.8	2.11
9	234.4	53.8	4.0	4.9	1.89
10	207.6	69.0	5.0	5.0	1.86
11	235.3	60.8	8.0	4.6	2.25
Average	226.0	60.5	5.4	5.1	1.86

Detailed reports were forwarded to the entrants at three month intervals, and the final report distributed to an increasingly large mailing list and made available for publication in poultry journals. Also results of the Test, as well as results of research and practical experience, were passed on to producers, hatcherymen and interested persons by members of the Poultry Branch staff.

POULTRY SHOWS

The Toronto Royal Winter Fair was held again in November with entries of dressed poultry by producers and by commercial firms. Entries are pre-selected and only those of merit are forwarded. This dressed show is considered the show window of the industry and exhibiting there is of considerable value to producers as a whole, as Eastern Canada represents the largest consuming centre.

ROYAL WINTER FAIR POULTRY PRODUCTS SHOW

	1958	(Alberta Awards) 1959	1960	1961	1962
Championships	—	—	—	—	—
Firsts	5	17	—	3	2
Seconds	12	2	4	4	4
Thirds	—	—	—	1	—
TOTAL	17	20	4	8	6

The Alberta Poultry Show was held in Calgary in December and attracted greater entrant and public interest.

BRANCH ACTIVITIES

The following table indicates in part the scope of branch personnel activities:

Terr.	Re-inspections			Service Calls		
	1962	1961	1960	1962	1961	1960
1	4	14	69	98	109	98
2	56	106	152	64	86	95
3	50	70	165	40	45	48
4	80	47	98	25	53	37
5	63	96	140	75	47	52
6	14	29	30	56	63	38
TOTAL	267	362	654	358	403	368

The number of council, producer meetings and poultry shows judged is indicated in the following table:

Territory	Council Meetings	Producer Meetings	Shows Judged
1	6	1	1
2	5	1	3
3	2	1	0
4	2	1	1
5	6	2	2
6	1	4	2
TOTAL	22	10	10

The poultry councils of Lethbridge, Red Deer and Barrhead were active throughout the year. Exploratory meetings of interested individuals in Calgary and Edmonton were held, however, no definite council formed. The Alberta Poultry Federation endeavoured to function as a central body or clearing house for all groups.

The Annual Hatcherymen's Short Course, sponsored jointly by the Veterinary Services and Poultry Branches was again held. Interest continues keen in this Short Course by those engaged in the poultry industry.

The Hatchery Sanitation Control Testing Program, in its third year, was continued on a voluntary basis and received 100% co-operation and support from the hatcherymen.

The poultry cost-study conducted jointly by Farm Economics and Poultry Branches continued in its second year. Of the 16 original co-operators, 13 completed the year. It was anticipated that this study would continue for a minimum of three years.

The Poultry Commissioner attended annual meetings of the Canadian Produce Association (Western Division) and Canadian Hatchery Federation. He also served on committees of various industry organizations throughout the year. He and/or members of the Poultry Branch attended meetings of various segment groups of the industry.

Report of the Fur Farm Branch

R. W. GILLIES, Supervisor

GENERAL

The fur farming year of 1961-62 was rather a successful one for Alberta fur farmers. Pelt prices were firm, but the most encouraging aspect to the industry was the clear-out of all furs at the early seasonal sales, which gave the fur farmer the opportunity of paying out his obligations promptly and to organize his farm budget for the year ahead. Alberta mink farmers shipped and exported pelts and live animals to a total of 151,582 mink with an estimated value of \$2,568,833.00.

Again this year there was a slight decrease in licenses issued, but production figures have again increased and dollar return was one of the highest in the history of the industry. Chinchilla pelts reaching the market remains about the same, with a total of 1,002 chinchilla recorded as being exported.

HEALTH

Two cases of distemper and one new case of virus enteritis were diagnosed to make this the most disease free year since this writer's tenure of office. The first case of botulism in Alberta was diagnosed on a Calgary ranch early this summer. Losses in this case were quite acute, but prompt action by the rancher and Veterinary Laboratory staff brought the situation under control with an 11% loss of stock; still much less than cases of botulism reported elsewhere.

The overall kit increase reported was very good and general mortality loss was exceedingly low—to make this year one of Alberta's best production seasons.

FIELD DAYS AND SHOWS

With the voluntary quarantine still in effect in the Calgary area a local Field Day was held at which John White of Hudson Bay Co., Montreal, and John Ross of Edmonton office acted as judges.

The Field Day planned for Faust was cancelled by the local association.

The Annual All Male Live Mink Show was held this year at Lac la Biche with a total of 357 mink being judged by Mr. Ted Pappas Jr. of the Western Canadian Raw Fur Auction Sales Co., Vancouver, assisted by Ted Thodes of same firm and Arthur Rippin, prominent rancher from Widewater. This was Lac la Biche's first effort at staging an official mink show and the committee in charge are to be complimented on a very successful effort.

The first day of judging was followed by a banquet which catered to 175 people including ranchers, towns people, and out-of-town visitors from as far away as Montreal. This show

and banquet seemed to be a real stimulus to the district locally. The supervisor acted as Master of Ceremonies and introduced over fifty out-of-town visitors to the assembled group.

The Annual Provincial Chinchilla Field and Educational Day was held at the Lacombe Experimental Farm on September 9, 1962. It featured a judging contest this year which proved highly successful and drew good participation. Live chinchilla shows were held in both Edmonton and Calgary.

FUR BREEDERS ASSOCIATIONS

Fur breeders associations continue to be active in the affairs of the mink and chinchilla breeders. This Branch assisted these associations whenever called upon.

The supervisor was granted permission to attend the Annual Meeting of Canada Mink Breeders held at Vineland, Ontario, in September, 1962. The writer was on the program and presented two papers on behalf of the mink industry. It never fails to amaze this writer at the efficient way this volunteer organization works on behalf of all the mink breeders in Canada.

OFFICE

The long established office program, visitation, inspection and mutual assistance has been maintained with all phases of the fur raising industry.

CURRENT CONDITIONS

The fur market of December, 1962, and early January, 1963, opened quite firm with the outlook that the Canadian crop of mink pelts will again be sold on early markets.

Standard and pastel mink moved well at advanced prices but resistance and price adjustment was noted in some of glamour color shades. A general note of optimism prevails in the trade at the early part of the selling season.

Nutria raisers were having trouble establishing a suitable pelt market and industry seems to be on the wane.

Chinchilla pelts were well received by the trade, but quantities have not increased to any great extent.

FUR FARM STATISTICS UP TO AUGUST 31, 1962

NUMBER OF ANIMALS DECLARED ON FUR FARMS IN ALBERTA, 1961-62

Kind of Animals	Total No. of Animals	Average Value Per Animal Sept. 1961	Total Valuation
Mink Standards	56,370	17.50	\$ 986,475.00
Mink Mutations	158,783	16.50	2,619,919.50
Chinchilla	3,949	17.00	67,133.00
Fox	107	12.00	1,284.00
Nutria	506	5.00	2,530.00
Misc.	53	15.00	795.00
	219,768		\$3,678,136.50

Livestock Value on ■ current pelt basis

NUMBER OF ANIMALS PELTED ON FUR FARMS IN ALBERTA, 1961-62

Kind of Animals	Total No. of Animals	Av. Value Per Animal Fall 1961	Total Valuation
Mink Standards	38,606	17.50	\$ 675,605.00
Mink Mutations	112,810	16.50	1,861,365.00
Chinchilla	906	17.00	15,402.00
Fox	53	12.00	636.00
Nutria	49	5.00	245.00
Misc.	—	—	—
	152,424		\$2,553,253.00

NUMBER OF LIVE ANIMALS EXPORTED FROM ALBERTA, 1961-62

Kind of Animals	Total No. of Animals	Av. Value Per Animal	Total Valuation
Mink Standards	57	75.00	\$ 4,275.00
Mink Mutations	109	75.00	8,175.00
Chinchilla	96	30.00	2,880.00
Nutria	Nil	—	—
Misc.	5	50.00	250.00
	267		\$ 15,580.00

NUMBER OF ANIMALS RETAINED FOR BREEDING STOCK IN ALBERTA 1961-62

Kind of Animals	Total No. of Animals	Av. Value Per Animal	Total Valuation
Mink Standards	17,707	17.50	\$ 309,872.50
Mink Mutations	45,864	16.50	756,756.00
Chinchilla	2,947	17.00	50,099.00
Fox	54	12.00	648.00
Nutria	457	5.00	2,285.00
Misc.	50	15.00	750.00
	67,079		\$1,120,410.50

FUR FARM LICENSES, 1961-1962

Mink	282
Mink and Fox	2
Fox	1
Chinchilla	80
Nutria	11
Chinchilla and Nutria	2
Miscellaneous	3
	381

Report of the Water Resources Branch

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R. E. BAILEY, B.Sc., P.Eng., Chief Engineer

Division Supervisors

J. L. REID, B.Sc., P.Eng., Hydroelectric Development

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R. K. DEEPROSE, M.Sc., A.S.C.E., P.Eng., Hydrology

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A. G. UNDERHILL, B.Sc., P.Eng., Calgary District

R. L. FRANCIS, B.Sc., P.Eng., Construction, S.M.R.D.

R. J. KNIGHT, B.Sc., P.Eng., Lethbridge District and B.R.D. Construction

Hydraulic and Project Engineers

I. H. ANDERSON, B.Sc., P.Eng.

A. R. STROME, B.Sc., P.Eng.

W. R. BISHOP, B.Sc., P.Eng.

INTRODUCTION

The trend of increasing public awareness of the part that the development of the provincial water resources plays in the economy of the province was again made apparent during the past year by the very active program of The Water Resources Branch, hampered to a degree only by the shortage of funds. The nature of public demand on facilities of the Branch varies according to the climatic conditions which prevail in any year, however, the volume of demand increased. Those parts of the province which experience above average precipitation look to the Branch for assistance in drainage and flood control problems, while those areas suffering from near drought conditions seek aid to augment and stabilize adequate water supplies. The year 1962 was typical in this respect. The northern portion of the province received above average rainfall to the point of being excessive in some localized areas. On the other hand southern Alberta, for the fifth consecutive year, experienced near drought conditions. Table I illustrates these conditions and from this it will be noted that the dividing line between the two extremes runs approximately through Lacombe, Penhold, Pine Lake and Stettler. The one exception occurred in the Hanna-Coronation area where a very heavy rain storm during the summer provided much needed water for stockwatering and domestic use at a time when it appeared that a very critical water supply problem was eminent.

TABLE I
PRECIPITATION, 1962
(in inches)

Stations	Total Figures			Difference from Normal		
	April, May, June	April, May, June, July	Oct. 1961 - Sept. 1962	April, May, June	April, May, June, July	October - September
Beaverlodge, Grande Prairie, Fairview	5.1	9.0	17.9	+0.5	+2.0	+0.1
Athabasca, Lac la Biche, Elkpoint	8.7	13.4	23.3	+2.4	+5.6	+6.7
Campsie, Edmonton, Calmar, Wetaskiwin	7.6	10.7	20.6	+1.7	+1.6	+2.8
Camrose, Hughenden, Lloydminster	5.5	9.8	16.9	+0.7	+2.4	+2.1
Lacombe, Penhold, Pine Lake, Stettler	5.6	8.9	17.6	- 0.5	0.0	+0.5
Olds, Calgary, High River, Claresholm, Ft. MacLeod	3.8	5.3	13.9	- 3.1	- 1.6	- 4.1
Lethbridge, Raymond Cards on, Carway	4.3	5.9	13.6	- 2.2	- 2.3	- 3.6
Brooks, Medicine Hat, Winnifred, Groton, Foremost, Vauxhall	3.0	5.1	10.9	- 2.0	- 1.3	- 2.2
Hanna, Coronation, Naco, Wastina - Hemaruka	3.3	11.0	19.6	- 1.2	+4.3	+6.4

From the foregoing it is understandable that the fifty-fifty financial assistance program to municipalities for drainage and flood control reached an all-time high in 1962 since its inception in 1954, and water supply problems for urban centres continued to prevail with the Water Resources Office being called upon to render assistance in various forms to alleviate these conditions. Equipment was made available to the Department of Municipal Affairs to facilitate the pumping of water supplies for the towns of Hilda and Schuler. Similar arrangements were made with the town of Oyen, however, the quantity of supply from the existing well was insufficient and a new well was drilled later in the season. Equipment was also supplied to the town of Crossfield which found it necessary to pump approximately twenty million gallons over a distance of 3½ miles. All of these operations were carried out under the assistant supervision of Water Resources engineers. Other towns which suffered critical water supply situations included Champion, where virtually no spring runoff occurred, but fortunately the situation was remedied by rains which came later in the season. Nanton rationed water throughout the year but was successful in finding a new supply to augment the existing system. Hanna continued to investigate its supply of domestic water. One of the heavy local storms filled the old C.N.R. reservoir which provided sufficient supplies for the current season, however, additional storage is still necessary for adequate assurance during dry years. The town of Vulcan has undertaken a program to increase water supplies by a diversion from the Little Bow River. Consort, a town which has a chronic water problem, experimented with an electrodialysis plant. This plant removes the excess salt from a rather brackish well water. The plant proved a success but the cost of this process is estimated at about 87 cents per thousand gallons, which is more expensive than the previous system of surface supplies, and the town therefore returned to the use of the existing system which is adequate as long as surface water supplies are available.

There was a noticeable increase in the number of water licenses issued in 1962 and the P.F.R.A. small water development program paid \$217,347.00 in financial assistance for the construction of 1,026 dugouts throughout the province from April 1 to December 31. This again reflects the realization of the general public of the need for improved and assured water supplies for stock, farm, irrigation and domestic use.

Heavy precipitation in north-eastern Alberta, particularly in that area east of Athabasca, caused some extreme flooding conditions. In particular, Pine Creek overflowed and inundated large areas of land. Out of this arose one of the more unusual incidents of the year, namely "Operation Shepherd" in which Water Resources engineers rescued some 500 sheep which were marooned on an island due to high flood waters and were facing starvation. The Beaver River experienced a flood which exceeded any that has occurred for many years, and inspections were made into flooding conditions as far north as Wabasca Lake.

In north-western Alberta, particularly in the area of Manning and Hotchkiss, severe heavy rains persisted throughout the summer which greatly hampered construction operations being undertaken by Water Resources in this vicinity.

The construction of some major drainage and flood control projects were initiated during the year, the most noteworthy of which was the long standing problem associated with the flooding of the East and West Prairie Rivers in the vicinity of High Prairie.

The year 1962 saw the completion of construction on the first stage of the Brazeau Dam and the project effectively operated as a pollution control measure on the North Saskatchewan River.

Activity in the field of irrigation was confined principally to the continuation of the seepage and alkali control program together with discussions and considerations regarding a firm policy which could be applied to existing irrigation districts in need of assistance for the rehabilitation of their works or the installation of drainage facilities.

Many meetings were attended by the Supervisor of Irrigation to assist and advise on irrigation matters. This official also continued his duties in the capacity of Official Trustee of the Macleod Irrigation District and the United Irrigation District.

During the year several public meetings were attended by members of the staff for purposes of giving addresses on the water resources development program in the province. Among these was the Western Canada Reclamation Association annual meeting held in Lethbridge at which a member of the Water Resources Office took part in a panel discussion concerning long range inter-provincial water use planning. The Central Alberta Chambers of Commerce annual meeting was held in Consort and attended by representatives from all parties interested in the proposed William Pearce Project. The representative from Water Resources outlined the progress to date on the investigations into the feasibility of the scheme.

Early in the year the Water Resources Office moved from temporary quarters in the Brock Building to the newly constructed Terrace Building. Space was exceedingly limited initially, but later arrangements procured additional room which adequately remedied the situation.

The retirement of Mr. Arnold E. Murray on March 27, 1962 marked the termination of twenty-five years of devoted service to the Water Resources Branch. Our best wishes go to Mr. Murray for many pleasant days of most deserving leisure.

THE PRAIRIE PROVINCES WATER BOARD

From Alberta's point of view, the most important item of discussion at the Prairie Provinces Water Board meeting on September 19, 1962 revolved around the nature of a P.P.W.B. allocation. To take a concrete example, the Board allocation to the St. Mary and Milk Rivers Development is 796,000 acre feet of water for 465,000 acres. Several independent calculations by irrigation officials indicate that the gross diversion at the main headgates for 465,000 acres would be 36 acre inches per acre for the year, or 1,395,000 acre feet. Approximately 50% of this would return to the river either as deep percolation or surface runoff. The consumptive use would approximate 700,000 acre feet. One viewpoint expressed at the meeting was that the Board allocation of 796,000 acre feet represented the gross diversion quantity for the S.M.R.D. Alberta could not accept this viewpoint. It is obvious that the drought of 1961 caused greater demand for water.

The provincial members decided to hold a meeting of their own in Calgary on July 4 and this proved to be an exceedingly valuable conference having to do mostly with provincial statutes and proposed changes in the statutes affecting water resources.

At the September meeting of The Prairie Provinces Water Board a desire was expressed to proceed with the Nelson Basin Study at an early date. A study of the Qu'Appelle and Assiniboine system is also needed as this must precede any accurate determination of water releases from the South Saskatchewan River Dam to satisfy Manitoba's requests.

Alberta still takes the view that its policy and planning was established at the turn of the century by the Reclamation Service of The Canada Department of the Interior. This policy was based on the semi-arid nature of the southern parts of the three prairies provinces and the need for water conservation for domestic and irrigation uses was considered to be predominant. Alberta can see no reason to deviate from this policy and the drought of 1961 was a reminder in this respect. Alberta has been granted a total of 2,237,234 acre feet of water and this represents consumptive use. Alberta must live within this allocation.

It is of interest to note that the total discharge of the South Saskatchewan River at Saskatoon for 1960-61 was 4,261,000 acre feet. Annual consumptive use in Alberta at the present time is estimated at 1,000,000 acre feet of water on 600,000 acres of land. In order to evaluate the actual consumptive use of water in Alberta we will need to expand our water measuring services

to a limited extent. This will involve tabulations of inflow from major tributaries, diversions to irrigation and domestic water users and finally outflow at the Alberta-Saskatchewan border.

ADMINISTRATIVE ENGINEERING

WATER RIGHTS

There were 483 applications for water rights received and recorded during the year as compared to 307 for the previous year. A breakdown of applications as related to purpose and drainage basin is shown in Table II.

TABLE II

Drainage Basin	Dom.	Mun.	Irr.	Ind.	Power	Other	1962 Total	1961 Total
Athabasca River	2	.....	1	13	.....	.....	16	10
Bow River	31	.....	23	.....	.....	3	57	22
Forty Mile Lake .....	.....	.....	4	.....	.....	.....	4	2
Great Sandhills Group	8	.....	.....	.....	.....	.....	8	6
Kindersley Lake	1	.....	.....	.....	.....	.....	1	.....
Lodge Creek	8	.....	1	.....	.....	.....	9	1
Manito Lake	8	.....	.....	.....	.....	.....	8	9
Many Island Lake	10	.....	8	.....	.....	.....	18	11
McGregor Lake	3	.....	2	.....	.....	.....	5	1
Milk River	14	.....	4	.....	.....	.....	18	19
North Sask. River	19	.....	5	6	.....	2	35	34
Oldman River	61	2	49	.....	.....	.....	112	65
Pakowki Lake	13	.....	8	.....	.....	.....	21	9
Peace River	1	.....	1	1	.....	.....	3	1
Red Deer River	74	.....	35	2	.....	2	113	54
Sevenpersons Creek	32	.....	8	.....	.....	.....	40	47
South Sask. River	3	.....	2	1	.....	.....	6	12
Sullivan Lake	3	.....	3	.....	.....	.....	6	2
Tide Lake	1	.....	1	.....	.....	.....	2	1
Wildhorse Lake	1	.....	.....	.....	.....	.....	1	1
TOTALS	293	2	158	23	.....	7	483	307

The increase in the number of applications recorded over the number recorded in the previous year is as follows: 92 more applications for domestic, 66 for irrigation, 15 for industrial and 3 for other purposes. A total of 390 Interim Licenses for all purposes were issued as compared with 270 for 1961. Approximately 350 linen plans for domestic and irrigation projects were drafted.

IRRIGATION RIGHT-OF-WAY

Right-of-way plans for laterals and drainage canals in connection with the St. Mary and Milk Rivers Development and the Bow River Development, Provincial and Federal blocks are processed and approved by this office before proceeding to the Land Titles Office for registration. A total of 101 such right-of-way plans were registered, 78 in the Bow River Development and 23 in the St. Mary and Milk Rivers Development.

IRRIGATION WATER AGREEMENT

Sixty-six water agreements between the Manager of the Bow River Development, Federal Block, and the farmers were registered and filed in this office during the year 1962. Eighteen water agreements between the Manager of the Bow River Development, Provincial Block, and the farmers, and 47 water agreements be-

tween the Manager of the St. Mary and Milk Rivers Development and the farmers, were approved and filed.

Special water agreements between the Board of Trustees of the Eastern Irrigation District and the farmers are also approved and filed in this office, 80 such agreements being received in 1962.

INSPECTION SERVICES AND SPECIAL INVESTIGATIONS

During 1962, 240 complaints were investigated by this Division of the Water Resources Office. These complaints originated from municipalities, counties, groups of farmers, individual farmers and rural located industries. Some 85 miles of survey work was carried out in connection with these complaints.

Rainfall was particularly high in the north-eastern part of the province resulting in flooding around most small lakes and intermittent watercourses. Major lakes such as Lac la Biche and Cold Lake returned to near record elevations. Streams, such as the Beaver River and Waskatenau Creek, reached modern day record high levels causing extensive damage. These and similarly affected areas resulted in an 84% increase in this phase of the work.

Other inspections were made of water supply works in accord with procedures for issuing license. These works included Sherritt Gordon Chemical Plant, Wabamun, Vermilion, Forestburg and Drumheller power plants, Alberta Gas Trunk and Mr. Munson.

FINANCIAL ASSISTANCE POLICY

The Financial Assistance Policy continued during 1962 and briefly, this policy extends financial assistance to towns, villages, counties, municipal districts and local improvement districts facing serious drainage and flood control problems. The initiating authority must assume the responsibility for the project, while the government pays one-half of the total cost of the project up to a stated maximum. Above normal precipitation in the north-central and northern part of Alberta resulted in an increase in the total amount of financial aid granted in 1962 as compared to 1961. Table IV shows a summary of expenditures under the Financial Assistance Policy since its inception in 1954:

TABLE IV

	Amount Authorized by Order-in-Council	Total Amount Paid
1954-55	5,000.00	2,449.42
1955-56	24,500.00	10,566.19
1956-57	70,500.00	46,833.51
1957-58	54,250.00	54,616.48
1958-59	20,450.00	61,131.28
1959-60	60,900.00	31,130.95
1960-61	38,525.00	29,353.33
1961-62	27,500.00	21,554.24
1962-63	111,250.00	59,509.60 (to Dec. 31/62)
	412,875.00	317,145.09

A number of municipal drainage projects were submitted and approved as qualifying for financial assistance but lack of money prevented these projects from being constructed. They have

therefore been postponed until 1963 in the hope that sufficient funds will be provided to undertake these works.

DRAINAGE DISTRICTS

The total number of drainage districts remains unchanged from a year ago. There are nine drainage districts in the province and collectively they constitute a total area of 189,200 acres, of which 75,647 acres received direct benefit. There were no serious problems during the past year, although runoff resulting from snow melt and precipitation in some districts was above normal.

GRAVEL REMOVAL

In the past, gravel deposits have been excavated in such a haphazard manner that enormous quantities of good quality gravel have been ruined by mixing the stripping with the gravel. It is hoped that in future years control will be exercised in the proper operation of gravel pits and when the gravel supply in a pit is exhausted, the ground be brought back to its original condition and not left as a despicable eyesore. During the past year only one operator on the North Saskatchewan can be accused of improper operation.

HYDROLOGY

A variety of activities occupied the attention of the Hydrology staff during the 1962 season.

Studies of the hydrological characteristics of the headwaters of the Red Deer River for water supply purposes to the William Pearce scheme were continued. These studies involve rather complex and analytical procedures because of the absence of sufficient hydrometric records in the area. To expedite these calculations, the use of I.B.M. electronic computers has been initiated.

Studies and the compilation of reports on five major and two minor projects were carried out during the year. These were as follows:

1. A general report on hydrological records including a comprehensive map of precipitation recording stations in Alberta. This report sets the tone for long range goals of the hydrology program. Because the scarcity of hydrometric and meteorologic records is presently defying efforts to adequately define and describe the hydrologic characteristics of much of this province, except in very general terms, a policy of planning for more complete coverage of the province by an adequate hydrological network has been adopted. This involves both departmental planning and making representations to outside organizations responsible for collecting data. The successful creation of such a network would be far more important to the future development of this province than all the other combined activities of the hydrology division at present. Encouraging steps in this direction have been:

- (a) The addition of many Alberta Forestry stations to the meteorological network.
 - (b) Regular reporting of meteorological data by rangers in Banff and Jasper National Parks.
 - (c) An increasingly valuable flow of information from Water Resources crest stage gauges set up on small streams throughout the province. (This year, in particular, deep snows and heavy summer rains produced floods worthwhile recording).
2. A final report was prepared on the past two years of investigation into the regime relationships of the Red Deer River. Exceptionally little field investigation has ever been carried out on the regime characteristics of gravel bed rivers. The majority of our Alberta rivers are gravel bed rivers, particularly those in the headwaters area. The results of these investigations were very gratifying and has set the pattern for the investigation of other rivers in the province, both for the purpose of substantiating the results found on the Red Deer River as well as to enhance our knowledge of river behaviour generally. The Red Deer River report has, incidentally, received wide interest and requests have been received for copies from as far afield as Germany, Italy, Africa and New Zealand.
 3. A study was made of the water requirements for irrigation in the east-central portion of Alberta, this work being done principally for the purpose of considering benefits to be derived from the proposed William Pearce Project. The report on these investigations considers the moisture demands of the particular existing soil types, taking into consideration the nature of the crops and factors of evapotranspiration.
 4. A comprehensive analysis was made of the runoff flows in the Gross Ventre and Ross Creeks in relation to proposed facilities for obtaining additional supplies of water for the Ross Creek Irrigation District. These studies considered the frequency with which certain quantities of water would be available for the Ross Creek Irrigation District and the advisability of augmenting present supplies derived from Gross Ventre Creek by an additional diversion from Ross Creek. The results of these studies are contained in the general report submitted on the overall proposal.
 5. A study is presently underway to determine the probability of flooding along the banks of the Elbow River in Calgary. This study is being carried out at the request of the Calgary District Planning Commission in order that a better appreciation can be obtained of those areas which would be free from flooding and therefore available for development as opposed to those areas which may suffer periodic damage due to inundation.
 6. During the year a request was received for information concerning the minimum average flows of all major Alberta streams. This information was required to assist in the com-

pilation of a report on the feasibility of pipeline transmission of solids within and out of the province.

7. Studies were made on reservoir and flood flows along the Willow Creek. This was partly in relation to the proposed Chain of Lakes dam site on the headwaters of Willow Creek, and partly in response to numerous public inquiries concerning potential dams on this creek.

The amendment to the Water Resources Act during the 1962 session of the Legislature to include administration of the groundwater resources of the province has opened up a new field of responsibility for the Department. In the interest of becoming better acquainted with the nature and characteristics of groundwater flow near the surface, the hydrology division will be alert to the possibilities of acquiring new information or confirming existing theories.

A first step taken in this regard was the establishment of piezometer nests and groundwater wells in the vicinity of the canal presently being constructed on the East-West Prairie Rivers Project. It is hoped that the information obtained will indicate the source and flow pattern of the high groundwater condition which prevails in the area, and the relative effectiveness of the canal being constructed in remedying this situation.

GROUNDWATER

GENERAL

The past year has been an active one in the groundwater field. An amendment to The Water Resources Act was passed making groundwater subject to allocation, similar to that of surface water. It is now required to register all groundwater supplies to be used for purposes other than for domestic use. Consideration was also given to the means and methods of providing for the registering of industrial groundwater users.

Under the Federal-Provincial-Municipal Emergency Well Development Policy to relieve the drought stricken area of south-eastern Alberta, three municipal governments took advantage of the program. The County of Warner, Improvement District No. 22 and Special Area No. 2 all report excellent results and the agricultural wells are serving wide areas with domestic and stock water. Implementation of the program was undertaken by the Water Resources Office and included preliminary investigations, drawing up plans, contracts and specifications, supervising construction and final approval. The Federal and Provincial governments each contributed 35% of the total cost while each of the local governments paid the remaining 30%.

INSPECTIONS

Approximately 178 field trips were undertaken for the purpose of investigating complaints, checking on water well drillers, taking lake levels, supervising water well drilling programs and inspecting proposed lake shore developments.

WATER WELL DRILLERS

A continued increase was shown in the number of registered water well drillers and also in the number of reports received. The following figures will serve to show the gradual increase over the past five years:

Year	Registered Drillers	No. of Reports
1958	161	1100
1959	185	1050
1960	189	1005
1961	201	1221
1962	211	1484

LAKE LEVELS

Most lakes in south-central Alberta held their elevations or showed a slight decline while those further north experienced a rise. Calling Lake, for instance, rose approximately two and one-half feet while Gull and Sylvan, two of the most popular resort lakes, dropped approximately one-half foot.

The following list shows a comparison of median levels for some of the major lakes during the past five years:

	1958	1959	1960	1961	1962
Gull	92.03	91.24	91.29	90.29	89.67
Sylvan	78.17	77.50	78.05	77.58	76.80
Cooking	97.00	96.63	96.58	96.29	96.20
Buffalo	86.16	85.54	85.60	84.57	83.50
Wabamun	71.20	71.10	71.08	70.53	70.72
Pigeon	100.48	100.00	100.00	99.51	99.28
Lac Ste. Anne	97.07	97.26	97.57	97.14	97.35
Lac La Biche	96.18	97.03	100.55	97.82	98.74

Public demand reactivated investigations into a cause and possible cure of the progressive recession of the water level at Gull Lake. Studies were made into the possibilities of augmenting water supply to the lake as well as possibilities of lake water escaping through a buried aquifer. Shortage of funds necessitated interrupting these investigations before they were completed.

LAKE BED SURVEYS

The lake bed survey program was continued in 1962. The following lakes were surveyed:

Antler	Cooking
Bear	Jessie
Buck	Moose
Cardinal	Muriel
Carson	Red Deer
Charlotte	Snipe
Clairmont	Sturgeon

Since inception of our lake bed survey program, operations this year bring the total number of lakes surveyed in north-central Alberta to 30. The information obtained from this type of survey is incorporated in a plan showing depth contours of the lakes.

CONSERVATION AND DEVELOPMENT OF WATER RESOURCES

Work on the Department's program of water resources conservation and development was drastically curtailed during the past year because of lack of sufficient funds. As a consequence, the plan to carry out foundation investigations on a number of potential damsites which have otherwise been investigated and surveyed did not materialize. Intentions to carry out aerial photography operations on other potential watershed development met a similar fate.

A limited amount of work, however, was accomplished. The possibilities of a dam on the Lobstick River were investigated but the site was found to be unworthy of further detailed study. Two sites on the Highwood River were studied and ground control was surveyed to facilitate the compiling of topographical maps by the Technical Division of the Department of Lands and Forests.

Experiments were carried out to determine the advantages and accuracy of preparing profiles and cross-sections of damsites by photogrametric means rather than by field surveys. The results were very encouraging in that the photogrametric methods were found to be very accurate and the cost was only a fraction of the normal field survey method.

The following damsites are presently under study. Investigations on a few of these are nearing completion while others are in the initial stages.

Clearwater Gap	North Saskatchewan Gap
Clearwater Idlewilde	North Saskatchewan—Whirlpool
Stoney Creek 1 and 2	Whitegoat River
James River 1 and 2	Douglas Lake
Fallentimber 1 and 2	Swan Lake
Little Red Deer	Shunda Creek
Harold Creek 1 and 2	Coral Creek
North Saskatchewan—North Fork	Willow Creek—Chain of Lakes
Mistaya River	Oldman—Gap
Falls Creek	Burnstick Lake
Ram River—North Fork	Baptiste River
Ram River—South Fork	Bearberry Creek
Panther River	Red Deer River 1, 2 and 4
Pouce Coupe River	Cutoff Creek
Upper Clearwater Lake	Glacier Lake
Lower Clearwater Lake	Cataract Creek

The 1961 Annual Report made mention of the work undertaken on the Carvel damsite on the North Saskatchewan River. During 1962, discussions were held between the Provincial Government and the City of Edmonton with respect to the desirability of this dam and its relationship to the proposed Genesee power plant under study by the City. It was decided that construction of the Carvel site would not be in the best interest of long range planning as far as Edmonton is concerned. The project has therefore been abandoned.

DRAINAGE AND FLOOD CONTROL

The majority of the drainage and flood control projects undertaken during 1962 were in keeping with the fifty-fifty financial assistance policy with counties and municipalities. Most of these

were smaller projects with the exception of three undertaken in northern Alberta. Perhaps the highlight of the year with respect to this type of work was the approval of the proposed East-West Prairie Rivers Project, a problem that has a recorded history dating back to 1917.

MANNING DRAINAGE PROJECT

In 1952 the Water Resources Branch undertook a survey of a drainage project in the vicinity of Manning in northern Alberta. The proposed works were eventually constructed by the farmers of the area who derive benefit from the scheme and has since been operated by the farmers, each landowner being responsible for that portion of ditch which crosses his land.

In recent years, new lands in the area have been cleared, new roads have been built and general agricultural development has progressed to the point where the original system is now inadequate to handle the spring runoff problems. As reported in the 1961 Annual Report, petitions and requests were received to consider extensions to the original project. Surveys were consequently carried out with a view to the construction of a scheme that would meet present day demands.

During 1962 an agreement was reached with the Department of Municipal Affairs to undertake this project on a fifty-fifty financial contribution basis over a period of three years. Construction of the ditches began in May and the first year's work was completed by October. Some 6,000 acres of cultivated agricultural land and several miles of municipal and district roads will receive direct benefit from this project.

HOTCHKISS DRAINAGE PROJECT

A flooding problem in the vicinity of Hotchkiss was first brought to the attention of the Branch in 1952. Efforts were unsuccessful at that time in the attempts made to set up a form of organization or farmer participation as far as responsibility for remedial works was concerned. Nothing further developed until 1961 when requests were again received for assistance. A design was prepared for the project, and on this occasion an agreement was prepared between the Department of Municipal Affairs and this Branch on a fifty-fifty financial assistance program for the construction of the works over a two-year period.

The first phase of the work to be carried out in the first year includes the rehabilitation of the ditch constructed by the Public Works Department in 1935 on the east side of the MacKenzie Highway. The second year's program will be the construction of interceptor ditches on the west side of the highway. These ditches are designed to intercept the runoff from the high land to the west, diverting the water in fairly equal portions southward to the Hotchkiss River and northward to the Meikle River. Construction began in May and the first year's program was completed by October. As well as being beneficial to district roads, the project will provide drainage for some 4,000 acres of agricultural land.

FERGUSON LAKE DRAINAGE PROJECT

The Ferguson Lake Project is a problem associated principally with the flooding of Bear Creek and dates back to 1917. Some accounting of the recent history of the problem is to be found in the 1961 Annual Report. In 1962 the project was approved for construction under a fifty-fifty financial assistance program with the County of Grande Prairie. The work is to be undertaken over a period of three years.

Under a Winter Works Program last year, the County began the necessary brush clearing. Actual construction of the first stage commenced in the latter part of May and was completed by the end of September. Clearing for the second stage of construction next summer is presently underway. A great deal of assistance in the removal of beaver and beaver dams in Bear Creek has been received by the Fish and Wildlife Service of the Department of Lands and Forests.

Although the project will alleviate flooding conditions on at least 2,000 acres of agricultural land, prevent flooding and damage to two main highways and the railway grade, and eliminate present costly annual maintenance on the district market road, it is not anticipated that any degree of agricultural benefit will be noticeable until the end of the second year's construction. However, the first year's work has enabled the County to plan for the construction of six miles of access road that, prior to the undertaking of the channel improvement work, was an impossibility.

Considerable public controversy arose over the possibility of disturbing a wildlife habitat insofar as the effects of the project on Ferguson Lake are concerned. There seemed to be a great deal of misunderstanding about the effects the over-all plan would have on Ferguson Lake. The main purpose of the scheme is to alleviate flooding along Bear Creek but at the same time exercise a measure of control on the level of Ferguson Lake so that presently inundated, patented land will once again be made available to the landowners for agricultural purposes.

PEMBINA RIVER PROJECT

No further construction work was undertaken on the Pembina River scheme during 1962. Observations were continued, however, to record the progressive development of the works completed in past years and the relative effectiveness of this work in alleviating the original flooding problem.

EAST-WEST PRAIRIE RIVERS PROJECT

The background and history of this project, which dates back to 1917, is to be found in previous annual reports.

After four years of very intensive field investigation and study, a final design was prepared during 1962 and a proposal for undertaking the project was submitted for approval. This approval was received and early in the fall a contract was awarded to carry out construction for the first section of the five-year program. Of the 280,000 cubic yards of earth excavation

in this contract, 127,000 cubic yards had been removed by December 31.

To relieve recent flooding situations north of the Town of High Prairie, two miles of canal were also constructed and the dykes, which had been built in 1951 and recently damaged by high water, were repaired.

During the year several detailed surveys were undertaken as part of investigations into other drainage problems brought to the attention of the Water Resources Office.

McLENNAN SOUTH

A detailed survey of approximately two townships of land south of the Town of McLeannan has been completed, and a preliminary design prepared for the necessary drainage in this area. The project is feasible and could be undertaken in stages as the land becomes established for agricultural purposes.

WHITEMUD RIVER

For some years, complaints have been received concerning the excessive flooding conditions along the Whitemud River in the vicinity of Dixonville. This year a detailed survey of the channel was made in an effort to establish the cause of the flooding and to suggest possible remedial measures. Cleaning, widening and lowering of the existing bed grade would, no doubt, provide a relief from this flooding, however, it is doubtful that the benefits to be derived would justify the apparent high cost involved.

WHITEMUD CREEK

Some years ago the Municipal District of Smoky River began construction of a flood control project on Whitemud Creek located some distance south of Falher. This work was originally done with the cooperation of the Water Resources Office under the financial assistance policy.

As more land in the area became settled and more roads were constructed, the runoff pattern was changed and the previously constructed works became inadequate to handle the resulting additional runoff. Further surveys were therefore carried out and these established that more work in the northern section of the area was greatly needed. The Municipal District requested financial assistance to construct the works in 1963 for a total estimated cost of approximately \$8,000.00. Approval has been given and this work will be done early in the coming year.

Other work undertaken by the design and construction division during the year include the design and/or construction of the following projects: an additional reservoir for the Archer Memorial Hospital at Lamont, river protection works on the Red Deer River west of Innisfail, the Gagnon drainage ditch near Athabasca, the drainage and water supply facilities for the Olds School of Agriculture, additional spillway works at Moonshine Lake

for the Provincial Parks Board, and a new lake level control structure for Sturgeon Lake.

Twenty inspections were also carried out by members of the division which were mainly to do with problems of flooding and drainage. Other miscellaneous inspections of projects under construction and supervision of various surveys being conducted were also carried out.

The drafting section completed 269 drawings, 101 hydrographs and 32 plans for dam sites proposals. A composite aerial mosaic of the William Pearce Project was compiled on which is shown all potential dam sites, structures and canal locations.

WILLIAM PEARCE PROJECT

The history and purpose of the William Pearce Project may be found in the 1959 Annual Report.

During the past year work on this project has been intensified. Since the majority of the field information has been collected, sufficient data is available to concentrate efforts on the analysis of design, feasibility, benefits and cost estimates. The progress to date in this regard may be summarized as follows:

Upstream Storage and Diversion

Capacity curves, area curves, profiles and soil reports are now available on all major storage sites, however, further design is being postponed until hydrology studies are completed.

Transportation

Preliminary soil investigation along the proposed canal route from the Red Deer syphon to Sullivan Lake has been completed. In-place permeability tests were undertaken for about 20 miles of canal route.

A tentative canal route has been located on 10' contour maps which were prepared from aerial photographs through the services of the Technical Division of the Department of Lands and Forests.

Supplementary Supply

Surveys have been made and profiles and location plans prepared for the supplementary supply of water to the major streams occurring along the proposed route of the main supply canal.

Distribution

The areas which can be served with water in the east-central portion of the province have been plotted on 100' contour plans. Results of soil classification studies has been plotted on 5' contour topographical maps. An appraisal has been made of those areas which are suitable for limited irrigation, with respect to the desirability of irrigation having regard to the prevailing

precipitation, temperatures, evapo-transpiration, etc. A study of the domestic water requirements has been completed and an appraisal has been made of the water requirements for live-stock production in the area. Craig and Hamilton Lakes are being studied as possible reservoir sites in place of the use of Sullivan Lake which, because of its large surface area, would present evaporation problems.

It is hoped that a final report on the various alternative means of realizing the objectives of the project, the relative merits of each and the respective cost estimates will be completed in the coming year.

WATER POWER

In May of 1962 the Supervisor of Hydro-electric Development, Mr. J. L. Reid, left the Department on leave of absence to take on the position of Manager for a land and water development program in the Somali Republic in Southern Africa. During his absence Mr. Reid's duties are being carried on by Mr. Inge Anderson.

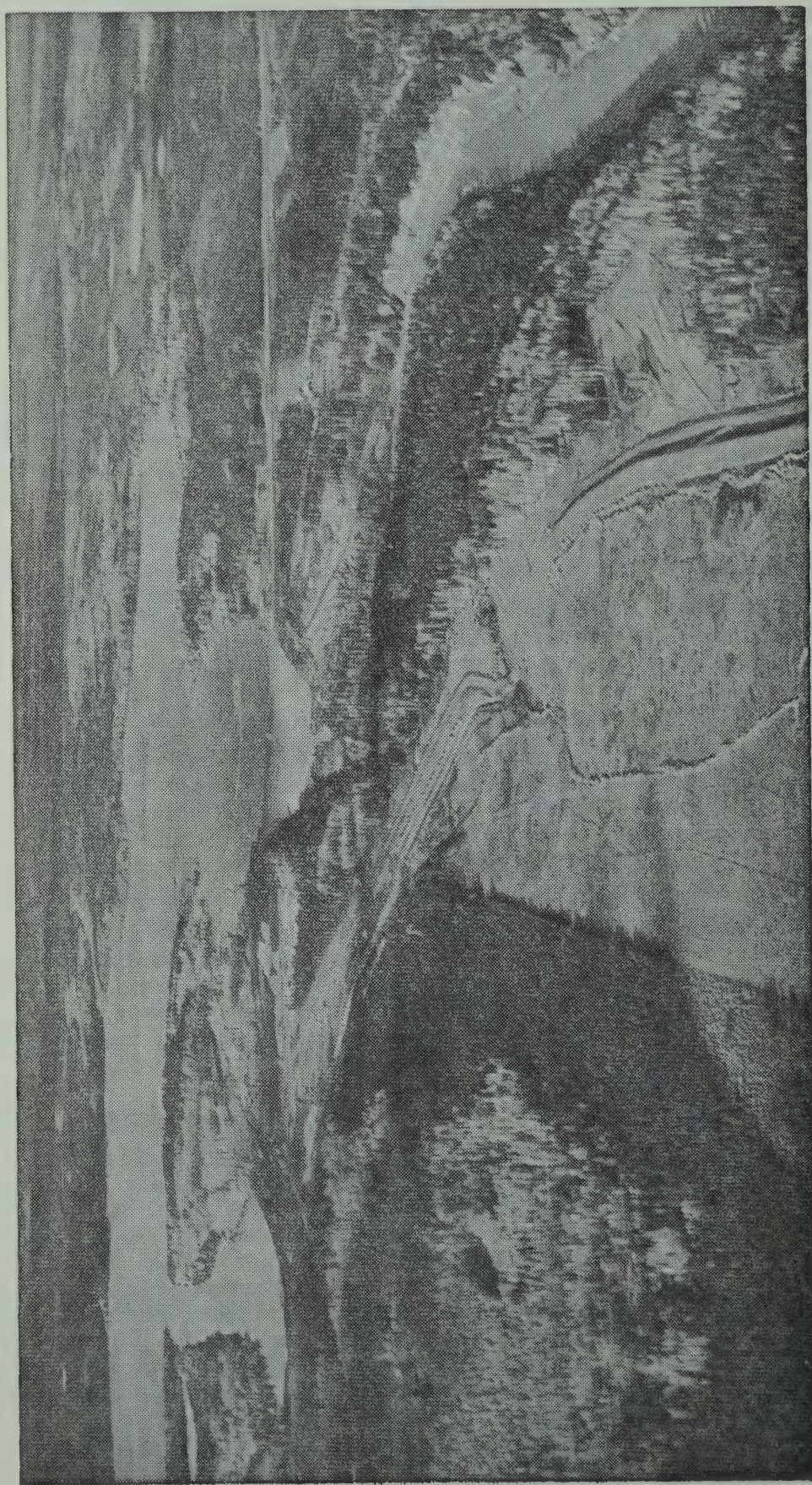
BRAZEAU DAM

The initial development of the Brazeau project was completed during the year, creating a reservoir of 440,000 acre feet of storage. Construction of the powerhouse 19 miles downstream from the main dam was commenced and is expected to be completed and commissioned for operation late in 1964.

This year 360,000 acre feet of water was available from the Brazeau dam for the alleviation of pollution in the North Saskatchewan River. From October 22 to November 1, natural flows of the Brazeau River were released from the dam. From November 1 to November 26, 2,500 c.f.s. were released continuously, then decreased to 1,500 c.f.s and maintained until December 21.

In order to determine downstream effects under varying conditions which will result once the Brazeau power plant comes into operation, a testing program was initiated in the fall of 1960 which would simulate actual conditions during power plant operation. These tests were again resumed this year on December 22 and will continue throughout the winter season. The program proposes to vary discharges from 1,500 c.f.s. to 15,000 c.f.s. but will maintain a daily total volume of 36,000 c.f.s. days.

During these tests, periodic aerial inspections are made along the North Saskatchewan River to observe ice formations and general effects of releasing fluctuating discharges from the Brazeau dam. Ice formation on the North Saskatchewan River in the fall was unusual due to the mild weather which caused temperatures to fluctuate below and above freezing point, consequently resulting in a formation of anchor and frazil ice. In an effort to alleviate these conditions, discharges from the Brazeau were reduced to 1,500 c.f.s. on November 26. This, together with more consistent below freezing temperatures, gradually resulted in a recession of the high backwater caused by the ice jam, and since that time, ice conditions have generally been what might be expected as normal.



Big Bend Dam on Brazee River — first stage Picture taken in October, 1952
Dam in centre—reservoir left of centre. Dyking for power canal in foreground. Reservoir pumps to be located at left centre.

Part of the study of the ice jam problem at Waskatenau included the survey of a profile of the ice jam to determine the effects of the restricted river channel resulting from the bridge construction, however, it was found that, in this particular instance, it had no material effect on the height of the backwater.

VERMILION RIVER

The flooding that occurred during the year on the Vermilion River was due to the combination of excessive rainfall in the area, beaver dams and the general restricted condition of the channel. Because of limited storage capacity, the Vermilion dam had only a slight dampening effect on the peak flows. It can be assumed, however, that the residents of the Vermilion area have been satisfied with the operation of the dam since no complaints of a serious nature were received concerning operations.

ICE COMMITTEE

The Ice Committee is made up of engineers from the Dominion Government, City of Calgary, Calgary Power Limited and the Provincial Government. Meetings were held on May 22 and October 1 to discuss the operation of the ice pack anchorage over the winter of 1961-62 and the future extension of the anchorage. It was decided that the anchorage be enlarged and the channel south of Prince's Island be improved. The Government of Alberta is to supply funds for the extension of the anchorage and the City of Calgary will provide the necessary funds to improve the south channel.

IRRIGATION

GENERAL

As previously noted in the report, 1962 was another dry year for southern Alberta. As a consequence, early heavy demands for stockwater in the south and east portions of the province were experienced. In contrast, well spaced rainfall and supplemental irrigation in the south-western area of the province alleviated the drought conditions generally throughout the year.

Heavy water demands prevailed in the larger irrigation districts and the number of requests from farmers for an increase in irrigable acreage was exceptionally high indeed, particularly in the St. Mary and Milk Rivers Development.

As in 1961, a continued public interest in the extension of existing facilities and the establishment of additional stockwatering projects has been evident. The Chamber of Commerce and the F.U.A. in the Medicine Hat area indicated continued interests in the feasibility of establishing a stockwatering and limited pasture irrigation scheme. The Taber Irrigation District, and farmers of the area presently served by the "Moore Ditch", persist in their requests for assistance in extending these facilities. Further requests have been received for community water projects in the Kimball-Spring Coulee area near Cardston, and from the New Dayton-Tyrrell Lake-Etzikom Coulee group in the south-eastern part of the province. These projects, unfortunately, lack a recognized organization with whom the Water Resources Office can negotiate and as yet there are still various problems that the farmers are endeavoring to solve in this regard. Concentrated

representation has been made to the government for consideration of the construction of a dam on McKay Creek, known as the Sarnia Project, to further enhance water supply facilities for the licensed water users in that area. The province has requested that the P.F.R.A. proceed with this project under the 1943 Federal-Provincial Agreement. The Ross Creek Irrigation District has been most active in pressing for additional supplies of water to compensate for the inadequate amount of spring runoff which has been experienced in Gros Ventre Creek.

Because of the ever increasing demand for water for agricultural purposes, individual water right holders are jealously guarding this right with a growing awareness of its value to them. As a consequence, many complaints were received and investigated which were related to the possibility of infringement of these water rights. Illegal water diversion structures also continued to cause some of the difficulties.

Many meetings were attended by the Supervisor of Irrigation to assist and advise on irrigation matters. This official also continued his duties in the capacity of Official Trustee of the Macleod Irrigation District and the United Irrigation District.

An indication of the growth and development of the newer irrigation projects is to be found in the consideration of the quantities of water delivered to the S.M.R.D. works from the St. Mary's dam over the past years.

Year	Water Delivered Acre Feet	Year	Water Delivered Acre Feet
1956	202,432	1960	355,008
1957	314,493	1961	362,996
1958	272,132	1962	525,634
1959	245,260		

The large increase in the water supplied in 1962 will be noted. This, in part, can be attributed to the recent continuous dry years that this area has experienced, however, it was for just such climatic conditions that the project was built and it is gratifying to observe how the irrigation farmer, of his own initiative, is making more extensive and efficient use of the water made available to him.

Irrigation for the Bow River, Central Block, continued at a high level due to the continuing period of below normal rainfall. The Western Irrigation District continues to receive requests for expansion of the irrigable area and, when possible, these areas are taken into the District.

The Eastern Irrigation District experienced another year of high irrigation water use also. Again the value of the power companies storage has been evident and without this regulation, periods of water shortage would definitely occur.

Along the Bow River many small irrigation projects have been established and the effect of these projects is becoming noticeable in the production of feed in the area.

As is usual, proposals were received to irrigate relatively large areas along our rivers in drier parts of the province by pumping from these rivers.

Table III shows the major irrigation districts and the areas that received water during the year 1961.

TABLE III

Name of District	Potential Area	Receiving Water 1961	Source of Supply
St. Mary and Milk Rivers Dev't.	345,000 ac.	157,300 ac.	St. Mary River
Magrath Irrigation District	7,015 "	5,000 "	{ All through the works of the S.M.M.R.D.
Raymond Irrigation District	20,061 "	15,500 "	
Taber Irrigation District	32,626 "	30,747 "	
Western Irrigation District	218,980 "	23,000 "	Bow River
Eastern Irrigation District	240,000 "	189,421 "	Bow River
Bow River Dev't (Federal)	114,000 "	71,140 "	Bow River
Bow River Dev't (Provincial)	25,000 "	9,463 "	Bow River
Mountain View Irr. District	3,719 "	2,760 "	Belly River
Leavitt Irrigation District	4,491 "	1,542 "	Belly River
Aetna Irrigation District	6,672 "	1,800 "	Belly River
United Irrigation District	34,034 "	23,095 "	Belly River
Lethbridge Northern Irr. District	90,162 "	73,637 "	Oldman River
Macleod Irrigation District	(Not operating)		Oldman River
Ross Creek Irrigation District	2,069 "	200 "	Gros Ventre Creek
TOTALS	1,143,829 ac.	604,605 ac.	

UNITED IRRIGATION DISTRICT

The United Irrigation District this year exercised excellent irrigation practices resulting in exceptionally heavy yields of grasses. The district has demonstrated its ability to pay its way and is becoming active as a stock handling area. Heavy damage to the district headgates, which occurred in previous years due to attempts to handle winter flow of water, was repaired during the month of October. The work of the P.F.R.A. related to the construction of works on the Waterton River dam presented a problem to the district with regard to the heavy loads travelling over district roads.

MOUNTAIN VIEW-AETNA MAIN CANAL

Watermastering operations on the Mountain View-Aetna main canal continued through the season under the supervision of the Lethbridge District Engineer. The three districts served by this canal are Mountain View, Leavitt and Aetna. Each of these districts employ a ditchrider who makes their respective requirements known to the Water Resources ditchrider who, in turn, makes the necessary adjustments on the canal to supply the required volume of water.

Before the irrigation season, the district engineer and the watermaster inspected all works of this canal system and again throughout the season periodic inspections were made to determine the need for maintenance work. This year, maintenance consisted of re-decking one timber culvert, carrying out repairs to one of the syphons, the installation of a sluice gate in order to outlet pondage areas, the construction of two timber pile farm bridges, the installation of pile bents on the abutments of a road bridge, and the installation of two precast concrete drop structures and two turnout structures.

MACLEOD IRRIGATION DISTRICT

This District was not active as a unit since, in its present status, it does not constitute an economical project to operate.

A reconnaissance of the area has been made for the purpose of determining what adjustments or renovations might be desirable to put the district back into operation. Further work is necessary on the proposed scheme which will eventually include about 1,500 quarter sections. Although the proposal appears to be economically sound, the future of the project depends entirely upon adequate upstream storage on the Oldman River system in order that sufficient water can be made available to the district during the irrigation season. Development of this district into a large stockwatering and limited irrigation project must be held in abeyance pending such future possible upstream storage facilities.

IRRIGATION PLANNING BOARD

Apart from the gathering of material for future studies, the Irrigation Planning Board was not particularly active during the year.

LAND CLASSIFICATION APPEAL COMMITTEE

Two Committee meetings were held to consider and settle differences with regard to appeals on land classification from farmers on the St. Mary and Milk Rivers Development and the Bow River Development.

ST. MARY AND MILK RIVER DEVELOPMENT

Apart from the loss of one day because of rain and two days because of all time record winds, 1962 was another good construction year on the S.M.R.D. All the precast structures constructed at the Grassy Lake headquarters during the winter of 1961 were installed during the past season. Experiments were conducted on a new design of a three-foot drop structure and the results look very promising.

Canal lining operations continued with ten miles of canal having bed widths from 2 to 8 feet being lined with polyethylene during spring operations. These canals are located in the districts of north Taber, Bow Island and north Grassy Lake. During fall operations two and one-half miles of canal were lined in the north Purple Springs and Grassy Lake districts. Owing to the mild weather conditions in the latter part of the season, most of the lining projects scheduled for the year were completed. In addition, two miles of canal have been prepared for lining and two miles of lateral are in readiness for grading and dressing work to begin.

Canal deepening was undertaken over some 12,000 feet of lateral with an average depth increase of five feet. On these canals new precast structures were installed to replace the existing wooden structures. Portions of four lateral canals consisting of 6,600 feet were relocated to more favorable ground conditions to eliminate seepage.

Approximately one mile of new tile drain was constructed in the South Taber district. Some alterations were also made on previously constructed tile drains for the purpose of eliminating silting problems.

Approximately 33 miles of open drain were constructed in 1962, the largest of which consists of a total of some 15½ miles located in the west Rattlesnake and north Bow Island districts. The other areas in which drains were constructed were the Bow Island, Taber and Purple Springs districts.

The following table shows the total lining, canal deepening and tile drain installations completed on the S.M.R.D. from 1958 to December 31, 1962:

TABLE IV

Total feet of lining

1958	13,000 feet
1959	41,209 "
1960	32,707 "
1961	32,050 "
1962	64,321 "

183,287 feet or 34.7 miles of polyethylene lineal canal

Canal deeping in place of lining, where soil conditions warranted it, also relocation of laterals where warranted.

1958	5,000 feet
1959	6,000 "
1960	8,000 "
1961	10,000 "
1962	10,225 "

39,225 feet or 7.8 miles of deepening and relocation.

Tile Drains

1959	1,900 feet
1960	12,405 "
1961	16,405 "
1962	5,274 "

35,984 feet or 6.6 miles of tile drains.

During the year approximately 270 miles of survey work was undertaken in connection with surface drainage, canal lining, preliminary and final surveys on constructed drains, profiles and miscellaneous studies. This work also included the surveys necessary to obtain information required in the design of overall drainage networks for the districts of Bow Island, Medicine Hat, Burdett, and Grassy Lake which have now been completed, and the areas of Purple Springs and Taber which are in the process of being compiled.

Other miscellaneous works undertaken consisted of the construction of six lateral extensions amounting to some 9,000 lineal feet of canal, and the levelling and building up of banks on the northeast Coaldale lateral which carries water to the Cameron Ranch district. Four precast check drops were placed in the Big Bend spillway, completing these works. The spillway on the Ready Made tract was also completed. Work was done on the Raymond west lateral and spillway which consisted of building up and levelling banks. Other works completed consisted of the installation of two turnouts from the main canal and eight lateral turnouts. Small drainage inlets were installed in four previously constructed drains and concreting work on the Chin Bridge abutments was finished.

BOW RIVER DEVELOPMENT (West Block)

During the year construction work on the Bow River Project, western block, was continued mainly in three phases:—trunk drainage, seepage control and additions or revisions to distribution systems. Topographic surveys were continued and virtually completed for all irrigable areas in the project. Survey work for problems to be remedied by future construction is continuing.

Eighteen miles of trunk drains were constructed together with $3\frac{1}{2}$ miles of interceptor and outlet ditches. Fifteen hundred feet of lateral ditch was also deepened. Works appurtenant to these ditches include 24 drop structures, consisting of timber or concrete and grouted rip-rap, one two-span timber bridge and 1,900 feet of corrugated iron culverts.

Alterations to the distribution system included the connection of eight tail-end ditches to the trunk drainage system through the means of three miles of newly constructed canals. These tail-end ditches, or wasteways, allow more flexibility in the operation of distributaries to give better service without flooding lands at the end of the ditch. Other work done on the distribution systems included the gravelling of 12 miles of canal bank for more reliable access during emergencies, the construction of one lateral turnout, seven farm turnouts and the placement of larger culverts at 20 different locations where weed jams had hampered operations. Two check structures were built for re-located and raised deliveries so that additional lands could be served with water.

Survey parties completed the topographic survey of 147 quarter sections and ran the necessary preliminary and construction surveys for works undertaken during the year. In connection with this survey 529 miles of transit line, 40 miles of bench marks levels, 26 miles of ditch cross-sections and $9\frac{1}{2}$ miles of ditch profiles were completed. In the field office, $9\frac{1}{2}$ miles of ditch earthwork was computed, 180 quarter section sheets of topography were plotted and contours drawn. Numerous cross-sections and profiles were plotted. Check and final surveys were run as necessary for construction work.

During the year the level of Lost Lake came up to the point where it damaged one farmstead. This lake received the runoff from over two-thirds of the district and it cannot be considered a sufficient outlet. Studies are underway to decide the best way to minimize flood damage around this lake at a cost that is not prohibitive.

DISTRICT OFFICES

CALGARY

Salvage operations after the fire which destroyed the Calgary Water Resources Office in 1961 were fruitless as far as the recovery of any records or files was concerned. The office was temporarily located in the Court House Building and later in the year permanent quarters were established in the Regency Building. Practically all the equipment lost in the fire has been replaced but the loss of the technical reports, files and reference library has been a handicap during the last year's operation.

The dry conditions reported in previous years continued throughout the 1962 season. There were many heavy local rain storms but no precipitation of a general nature. The heaviest local storm in the southern district occurred in Hanna. At Hemaruka nine inches of rain fell during the storm. Such storms were beneficial in providing local areas with stock water and supplies for domestic use, relieving what otherwise would have been a very critical water supply season.

In the Calgary area itself the rainfall was much below normal. Records indicate that total precipitation at the end of the year will be less than 12 inches as compared to the normal 18 inches. Water problems were therefore generally related to shortages.

Flow of the mountain streams was above normal throughout the year, however, with the extremely dry fall season, many streams were very low.

Because of the relatively dry conditions, there is an ever increasing realization on the part of rural dwellers of a need for adequate supplies of water on farms and ranches. Even in areas which were formally considered to have adequate water supplies, can be found continuing pressure to have either community projects or private reservoirs constructed. Many farmers and ranchers also think it desirable to construct drainage ditches to ensure that slough areas, which have been dry and farmed during the past few seasons, remain dry. Drainage works of this nature generally are brought to the attention of the Water Resources Office as a result of complaining neighbours. During the year there has been an evident increase in the occurrence of such situations.

In the Special Areas early spring runoff was sufficient only to fill the small reservoirs and dugouts. The larger reservoirs remained dry. Heavy local rains filled many reservoirs later in the season providing adequate water supplies in some areas. The local nature of the storms, however, resulted in other areas receiving no further supplies of water during the season. Irrigation was not possible in the Cessford district due to lack of water in the Bartman reservoir. A number of small areas were irrigated on Berry Creek where adequate supplies of water were available from Carolside reservoir. During the year the P.F.R.A. small projects division at Hanna completed the construction of approximately 450 dugouts and dams for water storage purposes. The smaller type of dam and dugouts received emphasis on this general program since these give the maximum amount of benefit for a minimum amount of cost and a minimum water supply requirement.

Ducks Unlimited constructed three projects north of Hanna. This area has the greatest concentration of projects in the Special Areas and is fairly well supplied with water storage facilities.

The Deadfish dam and the Hampton dam were taken over by the province from the P.F.R.A. Work was also undertaken during the year by the P.F.R.A. on the Carolside spillway in order to put it in a condition acceptable for transfer to the province in 1963.

Ten new hydrometric stations were established by the Federal Water Resources Branch during 1962. These were located on the following streams:

Bow River (2 stations)	Alkali Creek	Ponton River
Bluepound Creek	Blindman River	Fiddle River
Ribstone Creek	Boyer River	Medicine River

There are now approximately 175 hydrometric gauging stations in Alberta, of which 115 are classed Alberta stations. The

remainder are operated and classed as international, inter-provincial and irrigation return flow stations, which are the exclusive responsibility of the federal government.

That work of the Calgary office which was associated with the Calgary District Planning Commission showed an increase during the year. The District Water Resources Engineer was appointed as a member of the Planning Commission and during the year several meetings were held for the discussion of all phases of planning in the Calgary area. The Canadian Planning Association conference was held in Edmonton and the Water Resources district engineer attended this conference as a member of the Commission.

Many subdivision proposals were inspected with a view to determining the advisability of such subdivisions in relation to their effect on watercourse encroachment and general water resources. Such investigations included consideration of everything from the subdivision of a single home to that of a thirty million dollar high rise apartment complex. Such investigations also include consideration of the regulation of the use of flood plains in the Calgary area, and during the year some progress was made in this regard. This problem becomes more difficult as each year passes because of the increased demand for river valley land for residential and recreational use. In this regard, a study is being carried out by the hydrology division of the Edmonton office relative to the probable flooding along the banks of the Elbow River in Calgary.

The survey of the Lodge Creek and Middle Creek area was completed during the year. All projects in this basin were inspected and the condition and use being made of each was recorded. During the summer season, some 500 projects in the Pakowki Lake drainage basin were also inspected.

In the Carbon area work was undertaken during the fall on the improvement and relocation of a section of the Kneehills Creek. This work was carried out under the Water Resources financial assistance policy.

At the suggestion of the Water Resources Branch the High River Golf Club installed a section of rip-rap on the Highwood River using old car bodies. Car bodies were used to test their effectiveness in an area subject to heavy erosion.

Further protection work was completed by the Department of Highways in the Midlandvale area on the Red Deer River in keeping with recommendations suggested in a report prepared by the Calgary Water Resources Office.

During the year there was a noticeable increase in the number of applications received from oil companies for water re-pressurizing projects in various oil and gas fields in the Calgary district. There were no problems as a result of these requests.

As a member of the Advisory Committee on forestry research, the Calgary district engineer attended two meetings of this body during the year. Topographic surveys were also undertaken by Water Resources personnel for the compilation of topographic maps in the Marmot Creek and Dry Coulee research areas. This was done as part of the Water Resources contribution to the

co-operative efforts of the committee. As Chairman of the committee on hydrometric networks for the research area, the Calgary district engineer also undertook a study on the proposed network of hydrometric stations for the province.

The district engineer acted as Secretary to the interprovincial meeting on Water Resources administration and procedures. The report which was prepared by the Calgary office for the Prairie Provinces Water Board on the effect of a change in vegetation on runoff received approval and was published during the year.

An active program of cooperation and assistance with other organizations and government agencies continued throughout the year. Some of these activities included the construction of a rock dyke on the Little Bow River at the request of the Fisheries Branch to prevent the whitefish from going upstream from the Traverse reservoir in the fall and becoming trapped and lost. A report on emergency problems in the Calgary area was prepared for the Canadian Army; information on lake levels was supplied to the Department of Indian Affairs; several surveys were made on drainage and other problems requested by district agriculturists; the Alberta Gas Trunk Line requested permission to use water from various streams for the testing of pipelines. All such work was carried out without difficulty. During the early spring, a temporary diversion was made in the Elbow River in an unsuccessful attempt to recover the body of a girl who had been drowned.

LETHBRIDGE

During the year the Lethbridge district engineer made 40 inspections involving problems of water supply, flooding, seepage, erosion and stream contamination. Thirty of these inspections were made in the Mountain View-Aetna area in relation to the operation and maintenance of the main canal. Survey parties from the field office at Enchant were used to conduct investigations on some of these inspections. Men and equipment from Enchant were also used for maintenance and construction work on the Mountain View-Aetna canal. A few items of equipment not available at Enchant were obtained from the Water Resources headquarters at Grassy Lake, or were rented from local contractors.

As in 1961, private irrigation works, depending on snow melt for their water, had a very meager supply in 1962. Although established irrigation districts had little concern in this regard, stockwatering dams and dugouts were hard pressed for adequate water reserves.

Throughout the area there has been a noticeable increased interest in private irrigation schemes and proposals to improve water supplies of various creeks. Most irrigation schemes presently being proposed are for the purpose of servicing hay and pasture land, and should do much to stabilize the livestock industry of the area.

Other activities of the Lethbridge district engineer have been described in sections of this report dealing with irrigation, particularly that related to the Leavitt and Aetna Irrigation Districts and the Bow River Development.

Report of the Colonization Branch

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INTRODUCTION

Severe drought conditions prevailed again in 1962 in the irrigated belt. The supply of water served a peak demand during most of the season. Temperatures were not as high as in 1961 which favoured a better grain crop but slightly lower forage yields. The production of specialty crops was slightly above average for yield and quality.

The Colonization Branch provided development services, consulting services and extension aid to water users in all irrigation districts. Soils, Drainage and Irrigation Engineering investigations were restricted mainly to the St. Mary and Milk Rivers Development and to the Bow River Development, but some preliminary studies were started on the Lethbridge Northern, Raymond and Magrath Irrigation Districts. The administration of land settlement and water rights remained within the boundaries of the two major projects constructed since the war by the Province (S.M.R.D. and B.R.D.).

LAND SETTLEMENT OF THE ST. MARY AND MILK RIVERS DEVELOPMENT AND THE BOW RIVER DEVELOPMENT

Land settlement reached the stage of many paid up agreements with titles being transferred to thirty-three (33) settlers while eighteen (18) transfers were pending at the end of the year. The policy on land allotment was to add any available parcels of land to settlers already located who required additional land to establish an economic farm business. Only three (3) applicants were allotted land as new settlers while fourteen (14) additional parcels were added to the holdings of established settlers. Thirteen (13) allotments were pending at the end of the year. A block of land north east of Bow Island was transferred to the Department of Lands and Forests for development into irrigated community pastures by the Land Utilization Board. This was the third pasture to come under development in a plan to develop a total of eight (8) irrigated community pastures from blocks of land that were considered unsuitable for land settlement.

COLONIZATION MANAGER ADVISORY COMMITTEES

The St. Mary and Milk Rivers Development and Bow River Development Colonization Manager Advisory Committees toured the districts in May to examine farming conditions and review the settlers' positions and progress. Two meetings were held during the year, the first to consider policy and the second for allocation of land and the handling of settlers' programs. Eight (8) land purchase agreements were extended to twenty (20) year contracts, one (1) application was refused and another was pending at the end of the year. The Committee did not recommend any changes of policy, as with the added assistance of the Veterans' Land Act and the Farm Credit Corporation, it was apparent that land settlement progress was satisfactory at a reasonable level of farm management.

LAND TENURE

Tables I and II show the status of land tenure during 1962.

TABLE I

	S.M.R.D.		B.R.D.	
	Veterans	Non Veterans	Veterans	Non Veterans
Total number of settlers at the end of 1961	76	99	22	53
Settlers established during 1962	1	2	1	9
Cancellations, withdrawals and/or quit claims	0	4	0	0
Total number of settlers at December 31, 1962	77	97	23	67
Total number of land purchase agreements	85	119	25	74
Agreements paid up and title issued	15	18	0	2
Agreements paid up and title pending	7	11	0	3
Active agreements at the end of 1962	63	90	25	69
Additional parcels of land allotted to established settlers	4	10	1	5
Tentative allotments in 1962	0	3	0	0
Tentative additional allotments (partial units) in 1962	1	7	1	7
Parcels of land remaining unsettled	54	(*34 C.P.)	45	(*28 C.P.)
Number of parcels leased during 1962	61		51	
Cancellation of contracts (1951-1962)	3		3	
Withdrawals of contracts during 1962	0		0	
Quit claims (1951-1962)	20		3	

(*C.P. refers to lands reserved for Community Pasture development)

TABLE II

No. of Settlers in Arrears	S.M.R.D.		B.R.D.	
	Land	Water Right	Land	Water Right
1 year	106	84	47	14
2 year	78	45	29	5
3 year	62	21	12	—
4 year	40	6	4	—
5 year	18	2	1	—
6 year	5	—	—	—
7 year	1	—	—	—
Total Amount of Arrears	\$138,983.72	\$18,133.75	\$41,045.80	\$2,038.48

ECONOMICS

Two economic studies were completed and reported, one being a farm production study on a sample of 75 colonization settlers from all districts of the S.M.R.D. and B.R.D., the other being a farm economics report of all farms in a small selected area, the North Grassy Lake Drainage Basin. The latter area contains rough topography and variable soils of relatively low quality and consists almost entirely of colonization settlers. Due to the relatively low land quality of the North Grassy Lake tract the allocations of land were in larger units and the selection of settlers was mainly for livestock enterprises. This area showed more progress and better farm income than was recorded by the study of settlers in general throughout the two projects. Tables III and IV summarize the pertinent information from these reports.

TABLE III**FARM PRODUCTION STUDIES OF S.M.R.D. - B.R.D. SETTLERS AND OF A SELECTED AREA**

(for year 1960)	75 S.M.R.D. and B.R.D. Settlers	North Grassy Lake Drainage Basin
Land Area per Farm	215 ac.	346 ac.
Cultivated area	165 ac.	214 ac.
Irrigable area	79 ac.	100 ac.
Native pasture and waste	50 ac.	132 ac.
Value of livestock	\$2,855.00	\$6,190.00
Total operating revenue	\$3,218.00	\$5,018.00
Total operating expenses	—	\$3,438.00
Net farm income	—	\$1,580.00
Value of home used farm produce	—	\$ 375.00

TABLE IV**LAND USE OF S.M.R.D. - B.R.D. SETTLERS AND OF A SELECTED AREA**

(for year 1960)	75 S.M.R.D. and B.R.D. Settlers		North Grassy Lake Drainage Basin	
	Acres per farm	Returns per acre	Acres per farm	Returns per acre
Cropped area	119	\$ 21.80	168	\$18.40
Grain	73	14.40	111	16.60
Flax	23	24.50	15	28.30
Mustard	4	7.70	—	—
Sugar beets	1	181.30	—	—
Special or other crops	1	22.60	7	56.80
Alfalfa	9	33.40	17	41.70
Pasture	—	—	23	—
Summerfallow	—	—	46	—

Net farm income studies were conducted for eighty-two (82) settlers to assist them with their farm management. Forty-six (46) reports were produced for individual settlers. Seventeen (17) settlers entered a program in farm business analysis to follow the procedure outlined by the Farm Economics Branch. Data was also collected in preparation for an economic analysis of a reclamation farm where damage had occurred as a result of seepage and salinity, followed by canal lining, drainage and land development, to re-establish the production of the land.

WATER RIGHTS

Table V shows the status of water right agreements while Table VI shows the arrears of water right payments. Water

right rate enforcement lists were prepared describing each owner, purchaser and parcel of land from which water right payments were due for more than the 1961 season. These were adjudicated by the court. However, before registering the list at the Southern Alberta Land Titles Office, many of the accounts were paid and the remaining names were excluded from the adjudication lists by the Irrigation Council which was satisfied that farming operations would eventually be able to pay all irrigation rates in respect of the parcels. Consequently, the Colonization Manager has not taken title to any land by water rate enforcement.

TABLE V
WATER RIGHT AGREEMENTS

	S.M.R.D.	B.R.D.
Total Agreements	1,913	435
Number Classified Non-Irrigable	184	50
Paid Up Agreements	388	20
Agreements Deferred by Ministers' Orders	33	■
Other Inactive Agreements	105	189
Total of Active Agreements	1,203	175

TABLE VI
ARREARS OF WATER RIGHT PAYMENTS

		S.M.R.D.	
No. of Farmers in Arrears		Year	Amount
1 year	393	1962	\$59,220.60
2 year	195	1961	27,480.66
3 year	33	1960	4,277.31
4 year	10	1959	953.94
5 year	8	1958	237.77
6 year	1	1957	93.00
Amount of arrears owing			\$92,263.28

		B.R.D.	
No. of Farmers in Arrears		Year	Amount
1 year	38	1962	\$ 6,749.37
2 year	21	1961	3,321.13
3 year	4	1960	335.00
Amount of arrears owing			\$10,405.50

REVENUE

Table VII shows the collections from land sales and water right agreements. The land sale agreements concern only Colonization settlers whereas the water right agreements cover all of the irrigable lands in the two projects.

TABLE VII
COLLECTIONS ON LAND SALE AGREEMENTS AND WATER AGREEMENTS

S.M.R.D.		1960	1961	1962
Land Sales	■	41,000.00	\$ 41,000.00	\$ 62,000.00
Water Right		131,000.00	124,000.00	119,000.00
		\$172,000.00	\$165,000.00	\$181,000.00
B.R.D.				
Land Sales	\$	11,000.00	\$ 12,000.00	\$ 27,000.00
Water Right		7,000.00	8,000.00	11,000.00
		■ 18,000.00	\$ 20,000.00	\$ 38,000.00

IRRIGATION ENGINEERING

The responsibilities and duties of the Irrigation Engineer and his staff were re-organized into a working section of the branch in 1962. All aspects of irrigation engineering for the control, application, and use of water on farms was assigned to this group to develop the necessary design criteria and water use recommendations.

DESIGN CRITERIA "IRRIGATION GUIDE"

The evaluation of irrigation methods was expanded to acquire sufficient data to start the preparation of an irrigation guide to advise of the proper lengths, widths, and quantities of water flow for varying conditions of soil and topography as they exist in each irrigation district. Soil infiltration tests accompanied the evaluation of border dykes, corrugations and furrows. A start was also made to compile information regarding water holding capacities of these soils. The Canada Research Station at Lethbridge assisted with the analysis of samples.

"IRRIGATION GAUGE"

Data on evaporation and precipitation was gathered from each major irrigation project continuously throughout the season and correlated with the stage and type of plant growth and transpiration to provide consumptive use information back to the water users. This information was related to the water holding capacity of the soil and forecasts were made to predict the time and amount of irrigation water to be applied. The press and radio and television outlets were very co-operative in distributing the information on a weekly basis.

The Alberta Sugar Beet Growers Association organized a number of co-operative growers to record the response of sugar beet production by use of the irrigation gauge to schedule irrigations as compared to farmer judgements as were made in the past. The crop results and grower response was very favourable. Sugar beet yields increased generally by about two (2) tons per acre per irrigation application over generally accepted farm judgement practises up to the number of irrigations and amount of water indicated necessary by the irrigation gauge process. Table VIII summarizes the results of 1961 and 1962.

TABLE VIII
YIELD INCREASES OF SUGAR BEETS RESULTING FROM FOLLOWING
IRRIGATION GAUGE

Location	Year	No. of Irrigations District Irrig. Average Gauge		Yields District Average	Tons/ac.* Irrig. Gauge	Yield Increase T/A
Taber	1961	4	■	14.4	17.1	2.7
	1962	4	■	14.7	16.1	1.4
Coaldale	1961	3	4	15.8	18.1	2.3
	1962	3	4	13.3	17.3	4.0
Raymond	1961	3	■	19.1	20.5	1.4
	1962	3	4	12.4	14.2	1.8
Lethbridge	1961	3	■	13.6	14.6	1.0
	1962	3	4	11.7	12.2	0.5
Diamond City	1961	3	■	16.6	20.6	4.0
	1962	2	4	10.8	12.8	2.0
Picture Butte	1961	3	■	18.7	24.0	5.3
	1962	3	4	12.1	16.8	4.7
Bow Island	1961	■	■	13.3	16.8	3.5
Averages	1961	3.2	5.0	16.9	19.2	2.3
	1962	2.9	4.3	12.6	15.2	2.6

* 1961 yields based on plot results
1962 yields based on field results

WATER CONTROL STRUCTURES

Farm irrigation control structures were tested and calibrated to enable improvements in design and to provide information on water measurement. This program was limited to a small number of annual tests.

SPRINKLER IRRIGATION

Preliminary evaluations of existing farm sprinkler irrigation systems indicated that a large number of systems have been poorly designed when placed in the field or modified in operation to a low level of mechanical efficiency. Counselling was prepared to assist prospective purchasers in selecting systems suited to their farm lands. Further preparations were made to appraise designs of proposed systems and to advise revisions to increase the efficient use of existing systems.

EXTENSION

The Irrigation Engineer participated in short courses arranged by the Extension Branch at locations throughout the irrigation projects. Information was also presented to meetings at High River and Grimshaw. Numerous television appearances permitted the distribution of current and seasonally required information to the water users.

STATISTICAL SUMMARY

TABLE IX

I. "Irrigation Guide"	
(1) Number of border irrigation system evaluations	30
(2) Number of furrow irrigation system evaluations	10
(3) Number of soil water infiltration tests	96
(4) Bulk density studies: samples	350
tests	72
II. "Irrigation Gauge"	
(1) Number of district recording stations	8
(2) Number of weekly records compiled	120
(3) Soil moisture tests: sites	663
samples	2,652
(4) Water holding capacity: sites	193
samples	965
analysis	630
III. Water Control Structures: tests	8
IV. Inspections: field	107
office	32
V. Reports: major reports	5
VI. Extension: meetings, demonstrations, field days	52
TV programs	11
written releases	25
office interviews	15
circulars distributed	1,344

SOILS AND DRAINAGE INVESTIGATION SERVICE

The investigation of soils for the purposes of drainage and land classification was increased to a larger area of service. Many newly occurring seepage areas appeared in the S.M.R.D. and B.R.D. projects. Preliminary preparation was made for investigations of problem areas on the Lethbridge Northern, Raymond and Magrath Irrigation Districts. Soils investigational work to determine the feasibility of soils for proposed irrigation was conducted on six projects. The criteria for soil characterization

utilizing chemical and physical data was tentatively modified as part of a constant effort to incorporate advances of technology into soil classification standards.

DRAINAGE COMMITTEE

The Committee, representing management, construction and colonization of the S.M.R.D. and B.R.D. called eight (8) meetings to consider investigation reports, from which decisions were made to construct drains, line canals, settle damage claims, purchase damaged land, and negotiate drainage agreements with projects and counties. Thirty-three (33) miles of open drains, one mile of tile drains, and thirteen (13) miles of canal lining were constructed as recorded in the Water Resources Branch report. Fifty-five (55) damage claims were processed, and one quarter section of land was purchased. Negotiations on drainage agreements were proposed with the S.M.R.D. and the County of Forty Mile, the Raymond Irrigation District and the County of Warner, and the B.R.D. and the P.F.R.A.

SOILS LABORATORY

Increased output was the aim of the laboratory in 1962 which was achieved. Routine analysis of soils and water for salinity, sodium, and moisture required the continuous working strength of the laboratory, and only a limited amount of special analyses were processed.

DRAINAGE INVESTIGATIONS

Investigations were accelerated in 1962 by the addition of specialized field equipment and the replacement of an investigator's position that had been vacant for some time. This program of work was maintained well ahead of drainage construction and canal lining.

Studies indicating the downward movement of salts in soils where drainage works had been constructed supported the experience of successful surface reclamation of the lands.

Drainage effluent was sampled and analyzed for soluble salts which showed that large volumes of salts are being removed from irrigated lands by the drains.

Water table levels were recorded for use in decisions to construct drains, for evaluating the effectiveness of existing drains, for advising the value of drainage maintenance and for reclamation recommendations.

LAND CLASSIFICATION

Soils were examined to determine their feasibility of use for irrigation purposes on a number of proposed irrigation tracts, and on individual parcels of land where development of the land was suggested to take advantage of water from existing canals. These were detailed investigations requiring several traverses of each parcel of land with numerous loggings and samplings of soils.

STATISTICAL SUMMARY**TABLE X**

I.	Soil Investigation for Land Classification:	
	(1) Irrigable acreage classified: parcels _____	183
	acres _____	4,500
	(2) Carry over of proposed tracts partially investigated: acres _____	30,000
II.	Drainage Investigations:	
	(1) Number of projects completed _____	29
	(2) Carry over partially investigated quarter sections _____	306
III.	Field and Office Work:	
	(1) Number of soil borings by Sterling Drill _____	2,279
	(2) Number of soil borings manually and by Giddings Drill _____	2,054
	(3) Number of field analyses for soil permeability _____	706
	(4) Number of new installations for soil drainage studies _____	418
	(a) Number of readings of installations _____	7,236
	(5) Man days spent on Engineering Surveys _____	268
	(6) Number of soil and water samples taken in the field _____	9,013
IV.	Laboratory	
	(1) Number of soil and water samples analyzed for salinity _____	7,676
	(2) Number of soil moisture tests _____	62
	(3) Number of mechanical analyses _____	50
V.	Inspections	
	(1) Field inspections _____	820
	(2) Farm Visits _____	60
	(3) Office and laboratory inspections _____	200
VI.	Reports:	
	(1) Number of all major reports _____	53
VII.	Extension Work:	
	(1) Number of programs giving talks or demonstrations _____	2
	(a) Attendance _____	250
VIII.	Miscellaneous: man days of work _____	85

LAND DEVELOPMENT SERVICE**FARM IRRIGATION SYSTEMS**

Farmers worked with the land development staff on services provided in the field in 1962 to demonstrate that more land can be serviced by the existing staff and facilities. The acreage of land levelling increased by 57% over 1961. Installations to control the flow of water increased by 238%. The farm demand for improved irrigation systems was very strong. During one period of the season thirty-six (36) earthmovers were being serviced with land levelling designs and engineering surveys. Over 2.5 million cubic yards of earth (more than half the volume required to build the St. Mary's Dam) was moved to level 10,755 acres of land.

LAND LEVELLING TRUST ACCOUNT

The equipment in this operation produced \$80,000.00 worth of work which was about the same amount as done in 1961 but the cost of operation was considerably less in 1962. Old equipment was replaced by a more efficient four wheel rubber traction unit. The cost of earthmoving to patrons averaged from thirteen (13) to fifteen (15) cents per cubic yard of earth moved.

EXTENSION

Field days were organized in co-operation with the District Agriculturists to demonstrate the practical advances in the technology of irrigation practices. Farmers requesting advice both within irrigation projects and on private schemes were serviced with visits and advice. Interest in this service was considerably greater in the Western Irrigation District and in the vicinities of High River, Nanton, Claresholm and Granum than in previous years. Participation at meetings to present talks and demonstrations was continued at the same level as in previous years.

STATISTICAL SUMMARY OF THE DISTRICT IRRIGATIONISTS AND THE CHIEF TECHNICIAN

TABLE XI

I.	Land Levelling		
(1)	Total acreage of Engineering Surveys	14,949	
(2)	Number of completed designs	438	
(3)	Number of parcels levelled	375	
(a)	To detailed or semi-detailed standards	325	
(b)	To minimum development standards	50	
(4)	Total acreage land levelled	10,755	
(5)	Average cost per acre improved	\$50.00	
(6)	Total accumulative number of jobs since 1950 by Government Machines & Private Operators' Machines (not including miscellaneous)	1,469	
	Total accumulative area of acres improved since 1950	64,598	
(a)	Government equipment	19,874	
(b)	Private equipment	44,724	
(7)	Land Levelling Trust Account equipment		
(a)	Number of parcels levelled	53	
(b)	Acreage land levelled	964	
(c)	Average cost per acre	\$55.00	
(d)	Number of miscellaneous jobs which include dugouts, farmsteads, trimming, grading, and etc., wherein, an area is not improved for farming purposes	19	
(e)	Total revenue from all jobs (approx.)	\$79,091.00	
(f)	Operating expenses (approx. not including depreciation)	\$44,081.00	
(8)	Private Equipment		
(a)	Acreage land levelled	9,791	
(b)	Average cost per acre	\$49.00	
II.	Farm Irrigation Systems		
(1)	Number of water control structures, spiles, checks, diversion boxes and drop structures installed	913	
(2)	Number of evaluation tests	5	
III.	Topography Analysis for Land Classification		
(1)	Number of quarter sections investigated	177	
(2)	Total estimated acreage classified	28,320	
IV.	Irrigation Acreage Classification		
(1)	Number of engineering surveys	5	
(2)	Number of tracings completed (maps of quarter sections)	60	
(3)	Total irrigable acreage as per tracings	300	
(4)	Total number of maps, plans, reports, etc., issued to administrative agencies and farmers	685	
V.	Inspections		
	Detailed inspections by the professional staff, for consultation on Colonization, farm irrigation systems, pump irrigation systems, surface drainage, farm planning, survey procedures, drafting and equipment.		
(1)	Number of field inspections	950	
(2)	Number of office inspections	602	
VI.	Miscellaneous Engineering Surveys	322	
VII.	Reports		
(1)	Number of all major reports performed	290	
VIII.	Meetings, Field Days, Demonstrations, Short Courses	80	
IX.	Miscellaneous		
(a)	Administrational		
(1)	Number of office interviews	1,923	
(2)	Number of newspaper, radio releases written	4	
(3)	TV programs	13	
(4)	Number of bulletins and newsletters issued	310	
(b)	Technical		
(1)	Number of miscellaneous drafting (general plans, drainage investigation plans and profiles, water control structure plans, posters related to irrigation, irrigation evaluation graphs and profiles, miscellaneous sketches and other plans)	311	

EDUCATIONAL LEAVE

L. J. McCracken completed an extended leave without pay for educational purposes graduating with a B.Sc. in Agriculture from the University of British Columbia in May. The title of his thesis was "Timing Irrigation of Sugar Beets" which was based on data collected in the field related to the Irrigation Gauge in Southern Alberta.

C. J. McAndrews received educational leave with three-quarters salary from January 1 to March 15 to complete the requirements for a Master of Agriculture degree from the Colorado State University which was awarded to him in June. The title of his thesis was "The Development of Land For Irrigation Farming".

L. D. M. Sadler was granted educational leave with three-quarters salary beginning September 15 for a period of one year to pursue graduate studies at the Utah State University leading to a Master of Science in Agriculture.

D. G. Harrington was granted leave of absence with three-quarters salary beginning at the end of the year to commence graduate studies at the Colorado State University leading toward a Masters degree.

LETHBRIDGE NORTHERN COLONIZATION MANAGER

P. M. SAUDER — L.N.I.D. COLONIZATION MANAGER

The land settlement portion of the Colonization Manager's business was completed in the year 1961.

Since 1954, financial assistance given by way of loans to water users has been limited to loans for sugar beet labour and hauling. The total amount loaned in 1962 was \$226,754.16, as compared with \$229,095.33 in 1961 and \$252,460.84 in 1960. The Secretary-Treasurer of The Lethbridge Northern Irrigation District looked after the office work in connection with the loans and the district bore the total expense of this service. The money used to make the loans was borrowed from the Treasury Branch in Lethbridge.

Beet labour in 1962 was made up as follows:

Origin of Labour	Area	Percentage
Japanese	406 acres	3.6%
Pre-war European and miscellaneous	1,498 acres	13.2%
Grower's own families	2,242 acres	19.7%
Indians	4,808 acres	42.2%
Post war Europeans exclusive of 1962		
Du'ch	608 acres	5.3%
Others	1,730 acres	15.2%
Mennonite	71 acres	0.6%
1962 immigrants	23 acres	0.2%
TOTALS	11,386 acres	100.0%

Two hundred and seventy-five (275) acres or 2.4% of the acreage was mechanically thinned.

Nine thousand, seven hundred thirty-three (9,733) acres or 85.5% of the acreage was mechanically harvested.

The following schedule gives statistics for sugar beet crops on the Lethbridge Northern Irrigation District for the years 1957 to 1962 inclusive:

Year	No. of Growers	Acres Harvested	Tons Harvested	Tons per Acre	Sugar Content	Total Price per Ton
1957	481	12,788	157,798	12.34	14.9%	13.23
1958	487	13,132	195,606	14.89	16.0%	15.32
1959	479	12,029	146,067	12.14	15.8%	15.61
1960	462	12,918	155,976	12.07	16.3%	15.00
1961	458	12,298	147,666	12.01	15.3%	13.72†
1962	408	11,386	134,674	11.83	17.2%	■

NOTE: † Expected to be this sum after the subsidy is paid.
 ■ Total price will not be known until all sugar is sold.

Sugar beets was, of course, the main specialized irrigation crop on the district and has done more to help the water users to become successful farmers than any other crop. Other crops such as potatoes, peas, turnips, carrots, cabbage, beans, parsnips, strawberries, cucumbers, corn, mustard, gladioli, sunflowers and flax are also grown but we have no definite reports on these crops.

Feeding and marketing of livestock and poultry have also for some time been important and profitable branches of farming on the Lethbridge Northern Irrigation District.

Report of the Agricultural Extension Branch

HEADQUARTERS

	S. S. GRAHAM, B.Sc., P.Ag., Director
L. W. RASMUSSEN, B.S.A., M.Ed., P.Ag., Supervisor of District Agriculturists	
C. A. CHESHIRE, B.E., P.Ag., Supervisor of District Agriculturists	
Mrs. V. G. MACDONALD, B.Sc., Supervisor of Home Economics Division	
Mrs. NANCY ZAVEDIUK, B.Sc., Extension Clothing Specialist	
Miss PATRICIA MASCALUK, B.Sc., District Home Economist at Large	
Miss DIANNE HAMMER, B.I.D., Hime Designing Specialist	
J. L. REID, B.A., B.Sc., M.Sc., Agricultural Engineer	
J. W. ULRICH, B.E., Assistant Agricultural Engineer	
C. L. USHER, B.Sc., P.Ag., Supervisor, 4-H Division	
V. T. JANSSEN, B.Sc., Associate Supervisor of 4-H Division	
S. FRASER, B.Sc., Assistant Supervisor of 4-H Division	
Mrs. LOUISE MACGUIRE, B.Sc., Associate Supervisor of 4-H Division	

DISTRICT OFFICES

Office	Agriculturist	Home Economist
Athabasca	G. L. Godel, B.S.A., M.Sc., P.Ag.	
Assistant	R. C. Gordon, B.Sc.	
Barrhead	C. C. Robinson, B.Sc.	
Berwyn	G. R. McNaughton,	
	B.Sc., P.Ag.	Miss N. McLaughlin, B.Sc.
Assistant	G. C. Boulet, B.Sc.	
Bonnyville	L. Gareau, B.S.A., M.Sc., P.Ag.	
Brooks	I. Lapp, B.Sc., P.Ag.	Mrs. N. Gray, B.Sc.
Associate	M. F. Wilde, B.Sc.	
Calgary	A. W. Beattie, B.Sc.,	
	P.Ag.	Miss A. Schelstraete, B.Ed., B.H.Ec.
Associate	K. Sveinson, B.Sc., P.Ag.	
Camrose	L. D. Williams,	
	B.Sc., P.Ag.	Miss K. Carney, B.H.Ec.
Assistant	R. E. Grattidge, B.Sc.	
Cardston	D. L. Steed, B.Sc.	
Claresholm	J. D. Jantzie, B.Sc.	Miss M. McLachlan, B.H.Ec.
Coronation	W. Dietz, B.Sc., P.Ag.	
Drumheller	S. W. Pettem, B.S.A.	
Edmonton North	J. M. Fontaine,	
	B.Sc., P.Ag.	Mrs. D. Westendorf, B.Sc.
Associate	A. F. Belyea, B.Sc., P.Ag.	
Edmonton South	P. Jamieson, B.Sc., P.Ag.	Mrs. M. Atkinson, B.Sc.
Grande Prairie	M. H. Jaque, B.Sc.	Miss S. Myers, B.H.Ec.
Assistant	N. G. Miller, B.Sc., P.Ag.	
Hanna	D. R. Macpherson, B.Sc., P.Ag.	Mrs. M. Cox, B.Sc.
High Prairie	E. Dobko, B.Sc., P.Ag.	
High River	C. E. Yauch, B.Sc.	
Lac la Biche	F. Strashok, B.Sc.	
Lacombe	W. McNary, B.Sc., P.Ag.	Mrs. E. Boychuk, B.Sc.
Assistant	A. J. Wiebe, B.S.A.	
Lamont	G. W. Shewchuk, B.Sc., P.Ag.	
Leduc	G. R. Gylander, B.Sc., P.Ag.	
Lethbridge	R. M. Trimmer, B.Sc., P.Ag.	Miss E. Bartman, B.Sc.
Assistant	E. L. Treffry, B.Sc., P.Ag.	
Mayerthorpe	H. B. Jeffery, B.Sc., M.Sc., P.Ag.	
Medicine Hat	J. L. Anderson, B.Sc., P.Ag.	
Associate	M. A. Cameron, B.Sc., P.Ag.	
Olds	H. J. Fulcher, B.Sc.	Miss P. Westman, B.H.Ec.
Assistant	L. Welsh, B.Sc., P.Ag.	
Ponoka	J. L. Kerns, B.Sc., P.Ag.	

Red Deer	R. D. Price, B.Sc.	Miss E. Davies, B.Sc.
Assistant	G. B. Parlby, B.Sc.	
Rocky Mountain House ..	G. A. Ross, B.Sc., P.Ag.	
Ryley	S. C. Powers, B.Sc.	
Sedgewick	A. E. Edwards, B.Sc., P.Ag.	
Smoky Lake	W. C. Yule, B.Sc.	
Spirit River	F. W. Graves, B.Sc.	Mrs. H. Moore, B.H.Ec.
Stony Plain	E. C. Lowe, B.Sc.	
Assistant	M. Kuryvial, B.Sc., M.Sc.	
Strathmore	K. H. Walker, B.Sc., M.Sc., P.Ag.	
St. Paul	J. B. Milne, B.Sc., P.Ag.	Miss E. Zawadiuk, B.Sc.
Taber	A. R. Jones, B.Sc.	
Associate	J. G. Calpas, B.Sc., P.Ag.	
Two Hills	Wm. Dent, B.Sc.	Miss M. Owens, B.Sc.
Vegreville	N. A. Chomik, B.Sc., P.Ag.	Mrs. J. Zaruby, B.Sc.
Vermilion	H. M. Douglas, B.Sc., P.Ag.	
Assistant	D. I. Peters, B.Sc., P.Ag.	
Vulcan	C. Roth, B.Sc., P.Ag.	
Wainwright	J. S. Duncan, B.Sc., P.Ag.	Miss G. Robins, B.Sc.
Westlock	W. A. Ross, B.Sc., P.Ag.	Mrs. B. McCutcheon, B.Ed.
Wetaskiwin	W. C. Proctor, B.Sc., M.Sc., P.Ag.	Mrs. D. Olecko, B.H.Ec.

PROMOTIONS AND TRANSFERS

Headquarters

R. E. English From Extension Branch to Farm Economics Branch.

District Agriculturists

L. Bauer District Agriculturist, High Prairie to Farm Economics Branch, Edmonton.
 E. Dobko Assistant District Agriculturist, Lacombe to District Agriculturist at High Prairie.
 A. F. Belyea Assistant District Agriculturist, Olds to Associate District Agriculturist, Edmonton North.
 E. Treffry Assistant District Agriculturist, Camrose to Assistant District Agriculturist, Lethbridge.
 L. Welsh Assistant District Agriculturist, Lethbridge to Assistant District Agriculturist, Olds.
 G. C. Boulet Schools of Agriculture to Assistant District Agriculturist, Berwyn.
 J. B. Milne Assistant District Agriculturist, St. Paul to District Agriculturist, St. Paul.

District Home Economists:

Miss A. Schelstraete ... District Home Economist, Olds to District Home Economist at Calgary.

APPOINTMENTS

Headquarters:

J. W. Ulrich Assistant Agricultural Engineer.
 Miss D. Hammer Home Designing Specialist.

District Agriculturists:

R. E. Grattidge Assistant District Agriculturist, Camrose.
 A. J. Wiebe Assistant District Agriculturist, Lacombe.
 M. Kuryvial Assistant District Agriculturist, Stony Plain.

District Home Economists:

Miss C. Robins Wainwright
 Miss E. Davies Red Deer
 Miss P. Westman Olds
 Miss N. McLaughlin Berwyn
 Miss M. McLachlan Claresholm
 Miss M. Owens Two Hills

LEAVE OF ABSENCE**District Home Economists:**

Mrs. I. Leavitt	Calgary
Miss S. Myers	Grande Prairie
Miss A. Schelstraete	Olds

RESIGNATIONS**Headquarters:**

C. R. E. Johnson	Assistant Agricultural Engineer
Miss S. Wood	Home Designing Specialist

District Agriculturists:

M. Chevette	St. Paul
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District Home Economists:

Mrs. E. Durie, Two Hills, to part-time District Home Economist, Two Hills.
 Mrs. E. Boychuk, Red Deer, to part-time District Home Economist, Lacombe.
 Mrs. B. Anderson, Claresholm.
 Miss P. Shore, Lacombe.

SUMMER ASSISTANTS

W. Collins	(4-H) Olds School of Agriculture.
M. Gratz	(4-H) Vermilion School of Agriculture.
R. Warrington	(4-H) Olds School of Agriculture.
Miss J. Sokoluk	(4-H) Olds School of Agriculture.
Miss R. Butterwick	(4-H) Edmonton.
C. W. Kirk	Agricultural Engineer, Olds School of Agriculture.
B. C. McFadyen	Agricultural Engineer, Olds School of Agriculture.
R. S. Forrest	Agricultural Engineer, Grande Prairie, Vermilion School of Agriculture.
J. A. R. Palin	Agricultural Engineer, Vermilion School of Agriculture.
Miss A. Fraser	District Home Economist, Grande Prairie.

SEASONAL ASSISTANTS

L. M. Wendelboe	Instructor, Rural Welding Clinic.
R. V. Archibald	Instructor, Rural Welding Clinic.

UNDERGRADUATE SUMMER STAFF

B. Shaw	4-H Division.
A. Rand	4-H Division.
D. Heupplesheuser	4-H Division.
Mrs. M. Hammond	Ass't. District Home Economist, Edmonton.
Miss L. Olson	Ass't. District Home Economist, Lethbridge.

PROFESSIONAL IMPROVEMENT LEAVE

M. H. Jaque	District Agriculturist, Grande Prairie.
A. E. Edwards	District Agriculturist, Sedgewick.

GENERAL

The Agricultural Extension Service was challenged during 1962 more than ever before to meet the changing and more demanding requirements of Alberta's still dominant Agricultural Industry. Our professional workers changed their major efforts from "mere purveyors of pills" of Agricultural information, which attempts to cure the various ills of farming, to the more demanding role of interpreting and guiding the intelligent application of the great volume of scientific agricultural information which has been available.

Inherent in this changed role has been the involvement of farm families in deciding their own wants and needs, in helping to develop a planned program to meet the goals which have been selected and to pursue a positive plan of work to insure achievement of the goals. This approach has helped many farm families to solve their own major problems and to reach more intelligent decisions.

DISTRICT AGRICULTURIST DIVISION

There were no general agricultural calamities or crises during the year. However, the changing needs of the Agricultural industry and the people engaged in this industry, were reflected in the activities carried out by the district offices. The need for more careful planning to make the best use of personnel and time was indicated by the preparation of a program and plan of work for every one of the district offices. The need for including the people in this planning showed up in the increase in local advisory councils. Some form of Agricultural or Extension council has been formed in twelve districts, with some progress in formation of such a group in several other areas. Local interest in this development was evident from the study, not only of the advisory function, but the overall importance of program planning—specifically Agricultural program planning—by the Agricultural Service Board and the County or Municipal council.

Co-ordination of activities was evident at three levels. Program planning more effectively co-ordinated events in the district, and made possible the initial steps in co-ordinating the activities of the specialists from the different branches in a sequence of district programs. Co-ordination between Extension and Field Crops Branch and the Federal Research and Experimental Stations made possible two regional courses dealing with pasture care, and management.

Additional training in some phases of Extension or Management was taken by twelve members of the Extension staff during the year, at centres outside of the province, while an additional nineteen took training courses in Alberta.

FIELD CROPS

Numerous basic production problems were dealt with under this section. Local Agricultural Service Boards were active in carrying out many of the projects.

A summary of the activities included:

1. Crop Improvement

A. Grain

Farmers participating in special projects	44
Meetings, demonstrations, field days, short courses, tours	74
Attendance	2,624
Registered seed—bushels instrumental in distributing	30,664
Commercial seed—bushels instrumental in distributing	406,620
Persons otherwise assisted	4,529

B. Forage

Farmers participating in special projects	357
Meetings, demonstrations, field days, short courses, tours, etc.	92
Attendance	3,961
Persons otherwise assisted	8,747

C. Seed Processing

Municipal plants assisted	42
Organization meetings attended	25
Director's meetings attended	247
Seed cleaning plants inspected	69
Seed drill survey samples submitted	860
Persons otherwise assisted	1,808

2. Soil Conservation

Special projects	279
Farmers participating	572
Demonstration fields	501
Seen by	4,786
Pounds of forage seed distributed	68,272
Meetings, short courses, field days, tours, etc.	139
Attendance	2,243
Soil samples forwarded for analysis	3,193
Persons otherwise assisted	3,309

3. Weed Control

Weed specimens identified	1,288
Weed specimens submitted for identification	366
Demonstrations	325
Seen by	3,131
Pounds of forage seed distributed	66,285
Meetings, short courses, field days, tours, etc.	108
Attendance	4,047
Persons otherwise assisted	4,753

4. Crop Pests and Diseases

Meetings, short courses, demonstrations, field days, etc.	60
Specimens forwarded for identification	640
Persons otherwise assisted	2,978

5. Animal Pest Control

Farmers participating in coyote control	2,401
Coyotes killed (estimated)	15,734
Farmers influenced to control warbles, lice, ticks, keds, etc.	4,915
Meetings, demonstrations, short courses, etc.	66
Attendance	1,830
Specimens forwarded for identification	102
Persons otherwise assisted	1,799

6. Agricultural Service Boards

Meetings attended	402
Farms assisted under supervision	181
Farms assisted under reclamation	20
Features—projects, tours, field days (not reported elsewhere)	172
Persons otherwise assisted	2,911

7. Horticulture

Meetings, demonstrations, etc.	87
Attendance	4,066
Farmstead plans assisted	644
Shelterbelt plans assisted	1,750
Trees planted	1,700,000
Demonstration and farm orchards assisted	267
Persons otherwise assisted	5,612

8. Beekeeping

Meetings and short courses	2
Attendance	47
Persons otherwise assisted	240

LIVESTOCK

Advice and information was provided on: livestock placements, herd and flock selections, artificial insemination, registration of animals, brands, dehorning, feed analysis, livestock marketing, bangs vaccination, nutrition, disease control, swine quality improvement and performance testing of cattle. Numerous enquiries regarding livestock diseases were referred to veterinarians and laboratory services.

A summary of these activities included:

1. Livestock Improvement

Special projects	91
Farmers participating	5,355
Livestock affected	45,072
Meetings, demonstrations, short courses, tours, etc.	223
Attendance	10,344
Herds or flocks selected or culled	468
Feed samples forwarded for analysis	620
Farmers assisted with pedigree registration and/or tattoo ..	1,408
Farmers using Departmental dehorners	1,438
Breeders using Departmental tattoo machines	326
Livestock placements (male and female):	
Horses	64
Cattle	3,145
Sheep	1,589
Swine	1,383
Poultry	19
Persons otherwise assisted	9,672

2. Veterinary and Livestock Disease Control

New Brucellosis areas actively promoted	4
Farmers participating in Bangs vaccination	55,023
Specimens submitted on advice of D.A.'s	974
Enquiries regarding diseases	4,467
Farms assisted with improved nutrition	1,527
Farms assisted with improved husbandry management	1,339
Meetings, short courses, etc.	67
Attendance	2,969
Persons otherwise assisted	2,818

POULTRY

District Agriculturists attended 22 poultry meetings at which there was an attendance of 728. Poultry problems were discussed with 951 people.

DAIRYING

The use of cow testing services and production records were encouraged together with improved breeding, feeding, care and management.

A summary of these activities included:

Special dairy projects for improved handling of dairy cattle and dairy products	33
Farmers participating	477
Meetings, demonstrations, tours, etc.	65
Attendance	2,127
Farmers influenced re dairy cattle testing	393
Cows on test in district	14,486
Dairy herds culled or selected	86
Persons otherwise assisted	1,762

4-H CLUBS AND JUNIOR ACTIVITIES

Work in this field continued as an important part of extension activities. In addition, to the organization and supervision of farm 4-H Clubs; District Agriculturists spoke on agricultural topics and gave talks on careers and educational opportunities in agri-

culture. They also gave detailed information to prospective students concerning the Schcols of Agriculture.

A summary of these activities included:

4-H functions attended by D.A.'s	1,557
Attendance at above	73,712
4-H Club Farm & Home visits	4,253
Talks and demonstrations by D.A.'s at 4-H functions	1,301
Other Junior Activities assisted	103
Attendance	5,471
Persons otherwise assisted	7,746

AGRICULTURAL ECONOMICS

There was increased participation in Agricultural Economic programs. Topics considered included: farm records and accounting, farm business analysis, economic principles, budgeting, marketing, farm leases and rental agreements, farm credit, income tax and estate planning.

The major portion of this work was conducted through organized discussion study groups or by individual contact in the office or on the farm. There were 1,705 families in 137 organized discussion groups. A total of 3,440 farm families participated in various phases of the work. Agricultural Economics was discussed on 1,786 farm visits and 4,710 office interviews.

AGRICULTURAL ENGINEERING

Agricultural engineering which was co-ordinated by the two specialists, was very demanding on the District Agriculturists and required 2,287 farm calls and 7,559 office calls. Farmstead mechanization, including water and sewerage, required the most assistance.

PUBLICITY

	1961	1962
Newspaper releases	2,306	2,344
Newspapers using releases	90	98
Radio Talks and Interviews	134	152
T.V. appearances	41	63
Newsletters written	213	355
Newsletter circulation	29,149	34,211

OTHER AGRICULTURAL EVENTS

This category included events of some importance that were organized or assisted by the District Agriculturists, and often involved other groups or organizations active in the district. Also included were the activities with Agricultural Advisory Councils, and preparations for A.R.D.A. programs. None of these were reported elsewhere.

Summary of the above:

Meetings attended	447
Attendance	20,181
Persons otherwise assisted	4,084

SUMMARY OF DISTRICT AGRICULTURISTS' ACTIVITIES

	1961	1962
Number of Meetings	4,589	4,690
Total attendance	190,861	193,182
Number of Farm Visits	23,572	19,934
Office Interviews	66,159	62,415
Phone Calls	55,631	56,017
Letters written	42,939	46,828
Bulletins and circulars distributed	157,438	151,023

HOME ECONOMICS EXTENSION DIVISION

HOME MANAGEMENT

	No.	Attendance
Lectures and Demonstrations	227	4,777
Home visits	460	
Home visits (farm and home program)	109	
Group meetings (farm and home program)	119	2,340
Persons otherwise assisted	1,442	

A Home Management lecture-study-discussion course, designed to interest and alert young homemakers to the application of management and economic principles in the home, proved successful and has grown in demand as the scope of this course becomes known. Emphasis was given to the two key ideas in home management—decision-making and organization. Partial budgeting was encouraged as a means of arriving at decisions regarding problems such as, does it pay to own a freezer, does it pay to take work outside the home, what does it pay to sew, and what labor-saving equipment do we need most?

Homemakers have shown a pronounced interest not only in business matters pertaining to the family and home such as wills, estates, insurance and legal rights but also in the broader aspects of legislation related to consumer goods, market practices and use of credit. Women's organizations have begun voicing their growing awareness of the enormous waste of time, energy and resources due to the woeful lack of sound, objective information on consumer matters.

The notable increase in the number of requests for information related to buymanship of household goods indicated that homemakers, as consumers, are expressing a desire to choose on an informed basis. This enabled them to make the best possible use of their incomes and thus contributed more to their living standards than would equivalent efforts to raise their incomes.

The topics in greatest demand in this section were: "Buymanship" (of equipment, furnishings, floor and wall coverings, food and clothing), "Consumer Beware", "Time and Energy Management", "Wise Use of Credit", "Steps to Security", "Home Accounts", "Does it Pay?", "Wills and Estate Planning", "Kitchen Organization".

FOOD AND NUTRITION

	No.	Attendance
Demonstrations	26	6,446
Lectures and study group meetings	231	
School lunch programs (organized and assisted)	5	
Home visits	225	
Persons otherwise assisted	3,147	

Additional information was given at meetings and achievement days of 64 4-H food and garden clubs on nutrition, food preparation, preservation and standards.

With food prices 3.3% higher than last year and food costs making up 27% of expenditures in the general consumer index, homemakers became more aware of food merchandising methods affecting their food dollar and made a more conscious effort to have their wants known regarding the use of unnecessary gimmicks, expensive and deceptive packaging. District Home Economists received more inquiries about food regulations and inspection and about the increased use of food supplies. There was an increased number of inquiries regarding food preparation and preservation techniques, comparative food values, and requests for

assistance with special diets. Other topics dealt with were: "Food for Young Families", "Managing Your Home Freezer", "What's on the Market in Quick Foods", "Make Your Calories Count", "Low Cost Meals", "What's in Your Shopping Basket".

Advice was given local hospitals and Senior Citizen Homes as to food buying, special diets, and use and care of equipment and furnishings. Individual assistance was given welfare recipients at the request of local welfare workers. A weekly C.B.C. radio program "To Market with Music" dealing mainly with Alberta produced foods, was undertaken. Newspaper articles, newsletters, radio releases, films and film strips were used to assist in bringing up-to-date information to the homemaker.

CLOTHING AND HOME SEWING

	No.	Attendance
Sewing Clinics (3½ days or more)	103	4,121
Sewing Clinics (1 day only)	13	158
Demonstrations and lectures	305	5,830
Individuals assisted	1,161	—
Home visits re: clothing	337	—

In October, Canada's Cost of Living Index rose to a record high of 131.5. The sharpest rise was in the prices of clothing where the Index jumped from 113.3 to 115.6. Most items of men's, women's and children's clothing increased in price, particularly ready-made coats, suits, and textiles. This was due mainly to import restrictions and increased tariffs on textiles and ready-made clothing from other countries. As a result of this, an increased number of rural homemakers requested sewing clinics to learn more advanced techniques to make garments that provided the greatest savings for the home sewer. 103 sewing clinics were held compared to 86 in the previous year.

Topics covered in the 305 lectures and demonstrations included wardrobe planning, accessories, selection of patterns, construction details, sewing techniques, fitting, new fabrics and what can be expected from them and how to handle them in sewing. A noticeable increase was noted in requests for topics dealing with buying and sewing clothing for children and re-making garments.

HANDICRAFTS

	No.	Attendance
Lectures and demonstrations	95	2,918
Individuals assisted	494	—

The rural homemaker who requested information on handicraft work was assisted as time permitted by the District Home Economists. There seemed to be a trend toward less projects undertaken by the homemaker because of increased activity outside the farm home. The work that was done has improved in quality and originality of design, so that the results achieved gave more satisfaction to the homemaker and more pride in her work.

HOME DESIGN

	No.	Attendance
Lectures and Demonstrations:		
(a) Housing	46	2,701
(b) Decoration	65	
Homes Planned:		
(a) Complete	68	
(b) Partial	127	
(c) Building and Finishing Materials	238	
Homes Remodelled:		
(a) Complete	29	
(b) Partial	150	
(c) Kitchens, Bath and Utility Areas	126	
Major Improvements (electrical, water systems, etc.)	43	
Individuals assisted in Interior Decorating (color and furnishings)	1,296	
Total Home Visits	773	

Increased requests for assistance in home planning and remodelling were noted. In 1961, 47 homes were planned as compared to 68 this past year.

The department's work was hindered by the lack of up-to-date blueprints. The 20 blueprints which were especially adopted for rural living have been in use since 1950. With the many changes in design in the last 12 years, these blueprints have little value for today's farm family. Blueprints designed for urban homes did not satisfy the requirements for rural families.

A "Home Design School" and "Wall Treatments to Enhance Your Home" were new projects added this year.

Requests for Home Building and Remodelling Schools continued to increase. Limited staff and time permitted filling only about one-half of these requests.

4-H GIRLS CLUBS

District Home Economists organized and supervised all phases of 4-H Girls club work in their districts. They were assisted by specialists and summer staff in conducting such functions as rallies, camps, judging competitions and achievement days. Many of the District Home Economists assisted with provincially organized 4-H functions. Details regarding these activities are reported in the Junior Activities Section.

Number of 4-H Homemaking Clubs	162
Number of lectures and demonstrations	672
4-H functions attended	607
Total attendance	27,270
Home visits re 4-H and other junior work	504

OTHER ACTIVITIES

District Home Economists arranged programs, lectured and demonstrated at 101 meetings attended by 3,395 persons in co-operation with other departments and organizations namely:—Dept. of Public Welfare, Rural Health Units, Dept. of Indian Affairs, P.F.R.A., Home and School Associations, Y.W.C.A., Catholic Rural Action Program, Mental Hospital Staff, Council of Social Agencies, Lions and other Service Clubs.

At the request of the Dept. of Public Welfare, Scales of Allowances for food and clothing according to age and sex were revised following price surveys in a variety of stores and areas of the Province. While the calculations were time consuming, the scales were also used by Municipalities in other types of welfare

assistance as well as providing the District Home Economists with basic information to assist families to estimate and compare living costs.

Three District Home Economists have worked jointly with the District Agriculturists in establishing and conducting 18 meetings with Advisory Extension Councils and Home Economics Advisory Committees.

Topics related to: "Harmony in the Home and Community", "Child Guidance", "Role of Teen-Agers" and "Social Changes and the Family" have been very well received at 25 lecture-discussion meetings—attended by 669. There were 192 families or individuals who sought personal guidance regarding family emotional and behavior problems.

At 43 meetings attended by 1,371 persons, topics discussed were: "Quantity Cookery and Service", "Etiquette", "Public and After Dinner Speeches", "Conduct of Meetings", "Personal Development" and "Entertaining Graciously". Individual assistance was given 339 persons.

District Home Economists assisted in an advisory capacity at 21 Fairs and set up 21 Exhibits.

Ten District Home Economists attended a one week Civil Defence Orientation and Welfare course in preparation for active assistance on Municipal Civil Defence Committees.

Services of this Branch were outlined at 259 meetings attended by 7,780. Schools of Agriculture and Home Economics courses were outlined at 44 meetings. Specific information was given 1,339 individuals regarding services.

INFORMATION AND PUBLICITY

All District Home Economists wrote weekly newspaper articles.

There were increasing numbers of requests for Radio addresses and T.V. appearances. Time required for preparation limited participation although radio addresses given were increased by 25 this year. A weekly C.B.C. radio program was undertaken on a trial basis.

Newspaper articles written	945
Number of newspapers using articles	110
Radio releases	98
TV releases	8
Radio talks and interviews	77
TV talks, demonstrations and interviews	13
Newsletters written	178
Total average circulation	15,074
Publications distributed	71,944

SUMMARY OF ACTIVITIES

	1961	1962
Demonstrations, lectures, field days and short courses	2,475	2,487
Fairs, conventions, judges and addresses	265	210
Total attendance	107,336	104,286
Letters requesting information	21,179	20,889
Home visits	2,530	2,453
4-H Girls' Clubs	166	162
Office interviews	6,013	5,870
Phone calls for information	10,264	11,552

Note: Apparent decrease in attendance and home visits may be due to the following reasons:

(1) An exceptionally long cold winter with very heavy snowfall.

(2) Time taken in working with smaller study groups and organizing advisory committees.

(3) Fewer short courses and fairs where larger groups may be addressed.

(4) An increase in other phases of work, e.g. radio addresses, staff training, preparation and organization for new types of programs.

(5) More requests for assistance (phone, letter, home visit, etc.) were complex in nature and require time for research and explanation.

4-H DIVISION

The major responsibility of the 4-H Division was the supervision and direction of the 4-H program in the Province. In addition, however, it was also responsible for a number of other Junior Activities with which the Department is associated. These activities, open to all rural young people, provided opportunities to those who for various reasons find it impossible to be members of 4-H Clubs.

The Division attempted to maintain it's program and to meet new requests during 1962. This was done with reasonable success although difficulties were experienced because of vacancies on staff all year. The recruitment of staff sufficiently qualified to fill positions that become vacant is one of the biggest problems associated with developing the program to keep pace with present day requirements.

The prestige of the 4-H program remained at a very high level throughout the year with general approval and acceptance being registered by members, parents, leaders and supporting organizations. There did develop, though, considerable interest in having included in the program projects in light horses. This interest stemmed mainly from light horse associations. No such project has been established as it is felt that this would not be in accordance with Departmental policy. This policy is to the effect that projects should be in the field of those things of some economic importance in agriculture or homemaking.

The decreasing rural population was again reflected in a slightly reduced membership. However, the actual percentage of eligible young people enrolled in 4-H rose to 11.1%. The average age of club members remained the highest of any province in Canada at 14.8 years.

The main project interest continued to centre in beef and dairy cattle for boys and in clothing for girls.

(1) A further extension of regional assistance in 4-H was undertaken for the summer months. This involved a staff member being located at Lethbridge to assist the District Agriculturists

and District Home Economists in Southern Alberta. This arrangement proved satisfactory and brought to three the regions being serviced this way.

(2) Stress was again placed on training of local voluntary leaders and on program planning as it is felt that time and effort spent here paid dividends in making 4-H more effective in reaching its stated objectives. In program planning help was offered districts that requested specialized assistance and all programs submitted to the Division were evaluated and returned with constructive comments.

(3) The Conference and Annual Meeting of the Canadian Council on 4-H Clubs was held in Edmonton in April. Considerable planning for this was done by our own 4-H Division.

In addition to provincial administration of 4-H and national responsibilities in the program the supervisor was named President of the Sixth Western Canada Farm Safety Conference. The planning of this conference involved considerable time which meant in turn a shifting of more 4-H work to other staff members.

ASSISTANCE WITH PROGRAM

(i) Other Departmental Branches:-

Substantial help in various phases of the program was given by members of the livestock, field crops, dairy and poultry and Schools of Agriculture Branches. An accounting of much of this assistance will be found in the reports of these branches. In all cases this help was very much appreciated.

(ii) Canada Department of Agriculture:-

Existing arrangements with the Canada Department were maintained. This involved financial help and assistance to swine, dairy and sheep clubs through the meat grading service.

Financially the Canada Department contributed \$10,455.11 to the 4-H program in Alberta during the 1961-62 fiscal year. Staff of the Federal Department also assisted in judging of 4-H events, in the scoring of carcasses and in the obtaining of carcass grading information.

(iii) Organizations:-

Support from organizations to 4-H at a provincial level amounted to approximately \$15,000.00. This was exclusive of premiums paid on 4-H livestock. In addition the field staff of the Alberta Wheat Pool and the United Grain Growers actively assisted with numerous 4-H functions throughout the year.

Tremendous support continued also on a local level from service clubs, Boards of Trade, Agricultural Societies, banks, livestock associations and others. The exact value of this help would be difficult to determine.

4-H CLUB DISTRIBUTION IN ALBERTA 1961-62**Agricultural Projects:**

	1961		1962	
	No. of Clubs	Members	No. of Clubs	Members
Beef	178	3,218	180	3,356
Dairy	67	1,173	63	1,069
Swine	10	123	8	104
Sheep	0	75	4	57
Poultry	1	17	1	17
Field Crops	64	891	49	688
Sugar Beet	—	—	1	24
Corn	—	—	1	16
TOTAL	329	5,549	307	5,331
Decrease (Agricultural Projects)			218 members, 22 clubs	

Homemaking Projects:

	1961		1962	
	No. of Clubs	Members	No. of Clubs	Members
Clothing	94	1,263	97	1,377
Garden	48	559	50	678
Food	17	207	14	188
Home Decoration	7	60	1	19
TOTAL	166	2,089	162	2,262
Decrease (Homemaking Projects)			4 clubs	
Increase (Homemaking Projects)			173 members	
Average age			14.8 years	
Total (all projects)			469 clubs	
Total (all projects)			7,593 members	

ORGANIZED CLUB ACTIVITIES

It is estimated that 80 - 90% of all 4-H work is carried out individually by members at home. This includes work on the project and on special assignments. In addition, club members in 1962 took part in organized group activities as follows:

In Agricultural Projects:

Regular Club Meetings	2,469	Achievement Days	226
Tours	345	Special Meetings	335
Leadership Courses	53	Other	246
Club Rallies	57	Total organized 4-H activities	3,731
Total attendance (4-H members and other persons)			104,424

In Homemaking Projects:

Total organized 4-H activities	2,100	Total attendance	49,152
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In All Projects:

Total activities	5,831	Total attendance	153,576
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LEADERSHIP TRAINING AND RECOGNITION

This continued as a very important phase of the work of the Division. A total of 19 one day regional courses were held which were attended by 520 leaders and assistants. In addition the Division sponsored two provincial training courses at the Schools of Agriculture. These were attended by 88 leaders.

Five year leadership certificates were presented to 31 persons, ten year certificates to eleven and 15 year certificates to one.

4-H CLUB WEEKS

A total of four club week programs were held at the Schools of Agriculture during the summer. Total attendance at club

weeks was 428 representing an equal number of clubs. Casualty insurance was taken out on all delegates this year for the first time. This was paid for by the delegates themselves. Official out of province delegations of 4-H'ers to club weeks were from British Columbia, Saskatchewan and Montana.

SCHOLARSHIPS

(1) Wheat Board Surplus Monies Trust Fund Scholarships:-

A total of 21 of these scholarships each to the value of \$100.00 were awarded at club weeks. Names of recipients are contained in the Report of the Board of Trustees found elsewhere in this annual report.

(2) Other Scholarships:-

The following scholarships, the awarding of which was based in part on record of 4-H were awarded during the year.

(a) Canadian National Exhibition Scholarship—value of \$600.00—Mr. Robert Niemi, Trochu.

(b) Alberta Wheat Pool Scholarships—Each to the value of \$200.00 and given to students in first, second and third year home economics at the University of Alberta. Third year—Elizabeth Johnson, Markerville; Second year—Linda Stepenoff, Paradise Valley; First year—Edith Blades, Ohaton.

(c) Henry Wise Wood Memorial Scholarships—value of \$135.00 each and tenable at Schools of Agriculture. Dwight Woody, Coronation; Alfred Woelk, Endiang; Yvette Jean, Lafond; Paul Fedec, Boyle; Nick Hudak, Worsley; and Allan Watson, Dawson Creek.

(d) Edmonton Rotarian Scholarships—value of \$100.00 each and tenable at Schools of Agriculture. Ed Leifsrud, Viking and Joyce Zolkewski, Thorhild.

PROVINCIAL ELIMINATIONS

These were held at the Olds School of Agriculture with delegates from all districts competing for provincial honours. Selection of delegates was made for the established awards and in addition this year for the Inter-Provincial 4-H Exchange to be held in 1963. Results from all competitions were as follows:

WINNING DELEGATES — National 4-H Club Week, Toronto, Ontario — November 10-15th, 1962

Wayne Lamble, Thorhild (Beef)
Don Hultholm, Holden (Beef)
Irene Bullick, Coronation (Beef)
Donald Wood, Tofield (Beef)
Alfred Woelk, Endiang (Beef)
Jack Craig, Betchton (Dairy)
Stewart Geekie, Balzac (Dairy)

Ted Berg, Josephburg (Swine)
Willie Brenenstuhl, Pembina (Field Crops)
Ed Dowhaniuk, Thorhild (Field Crops)
Sonja Bugge, Ryley (Clothing)
Jackie Hays, Irricana (Clothing)
Jennifer Brown, Cherhill (Garden)
Brenda Bull, Millarville (Food)

Montana State 4-H Congress, Bozeman — August 20th to 24th, 1962.

Stanley Church, Balzac (Beef)
Melvin Minchau, Viking (Dairy)

Sharon Wright, Cherhill (Garden)
Catherine Wenger, McKinley (Clothing)

U.S. National 4-H Conference, Washington, D.C., April, 1962.

Sharon Dobson, Paradise Valley Clothing Club.

Inter-Provincial 4-H Exchange, July 9th to 22nd, 1962.

British Columbia	—Karen Moseson, Rosebrier (Clothing)
Saskatchewan	—Terry Balisky, Sexsmit-hTeepee (Beef)
Manitoba	—Angus Park, Trochu (Field Crops)
Ontario	—Joyce Anderson, Markerville (Garden)
Quebec	—John Briggs, Ardrossan (Beef)
Prince Edward Island	—Doris Wyllie, Vegreville (Dairy)
Nova Scotia	—Gail Buchanan, Foothills (Beef)
New Brunswick	—Ruth Woods, South Edmonton (Clothing)
Newfoundland	—Carol Matier, Castor (Beef)

ALBERTA-MONTANA 4-H EXCHANGE

This was the 16th year of this exchange and as usual it proved to be one of the highlights of the year. Delegates from Montana who were guests of the province at club week at Vermilion were: Donald Herzog, Ronald Ullom, Sharon Greenwalt and Joan Chalmers. The Alberta delegates listed previously, were accompanied to the State Congress by Mr. S. Fraser, 4-H Division and Mrs. Helen Mocre, District Home Economist, Stettler.

CANADA - U.S.A. EXCHANGE PROGRAM

Canada again sent a delegation of ten 4-H members and two Departmental representatives to the National 4-H Conference in Washington, D.C. In return the U.S.A. sent a delegation of eight to National 4-H Club Week in Toronto and Ottawa.

NATIONAL 4-H CLUB WEEK

This event, sponsored by the Canadian Council on 4-H Clubs, was held in Toronto and Ottawa at the time of the Royal Winter Fair. Alberta was represented by the 14 delegates listed previously and by Miss Kathleen Carney, District Home Economist, Camrose and Mr. S. Duncan, District Agriculturist, Wainwright.

4-H ACTIVITIES

(i) **Camps, Rallies, Tours** — Fair camps were conducted at Vermilion, Vegreville, Camrose and Edmonton. In Calgary a rural youth week was sponsored by the Calgary Exhibition and Stampede Association. Camps also were held at Elkwater and Buffalo Lake. The latter was organized and conducted by the 4-H Division with financial assistance from adjacent Agricultural Societies, the Alberta Wheat Pool and the United Grain Growers. The theme at camps was "Conservation". Total attendance this year was 680.

Banquets and rallies were held in most districts during the year. Many of these took the form of color nights. The average attendance was about 150 persons.

(ii) **Thematic Displays**—Floats. The building of thematic displays and floats continued to be a popular activity with entries being noted in most summer fairs. Themes stressed good citizenship, farm safety and good agricultural and homemaking practices. The winning thematic displays in Provincial competitions

were: Edmonton-St. Alberta-Namoo 4-H Beef Club; Calgary-Red Deer 4-H Dairy Club. These two competed in the inter-provincial at Regina and placed fifth and sixth respectively.

(iii) **Public Speaking** — Now a very popular and worthwhile activity in 4H. Competitions were held at club, district, regional and provincial levels. Provincial winners were: Southern Alberta —Miss Linda Heron, Okotoks; Northern Alberta—Melvin Minchau, Bruce.

DISTRICT 4-H COUNCILS

The year saw establishment of several new councils and development of existing ones. These appear to have a place in organizing and conducting inter-club activities within districts. One council became incorporated under the Societies Act in order to function as a legal entity.

4-H CLUB NEWS

Three issues of the bulletin were published by the Division during the year. Total distribution to 4-H members and supporters of the program was 9,000 copies per issue.

PRESS, RADIO AND TELEVISION

All three media again supported 4-H very actively with television playing an increasingly important role. One television station working in conjunction with the Department, introduced a fifteen minute weekly 4-H program. Some of the telecasts here have been of an instructional nature beamed at 4-H members throughout the viewing area. 4-H Division staff were guests on 56 radio and 29 television programs through the year.

PUBLICATIONS

The following publications were produced during the year by the Division:

Alberta 4-H Clubs
Program Planning
Beef Club Record Book (revised)

First Year Swine Club Project Book
Outline of Garden-Horticultural Project
Garden-Horticultural Project Guide

COLLEGE 4-H

College 4-H groups were organized on the campuses of the Schools of Agriculture at Olds and Vermilion. The purpose behind these groups was to help cultivate future leaders for the 4-H program. A staff member was assigned to work with each group. Initial membership at each school was strong but it was difficult to evaluate the merits of this development.

POST 4-H

The 4-H Alumni club on the University Campus grew in strength to a membership of 70. The Division appointed a staff member to work with this group.

The third annual reunion of former provincial 4-H delegates was planned and carried out at the Banff School of Fine Arts by the delegates themselves.

NEW COLORS — UNIFORMS

The Provincial 4-H colors were changed from maroon and white to green and white. This is in keeping with national colors. In addition a new uniform was introduced for Alberta club members. This uniform is in the new colors. It basically consists of a green blazer for boys and girls with grey trousers and grey skirts.

PROVINCIAL RECORD AND PROJECT BOOK COMPETITION

These competitions continued to be an incentive to club members to excel in this phase of their work. The garden-horticulture projects were included for the first time this year. The following were named winners:

Dairy		—Doreen Guse, Coronation
Food	—1st year	—Bonnie Mulder, Red Deer Lake
	—2nd year & up	—Carole Ross, Olds
Clothing	—1st year	—Jean Withers, Lavoy
	—2nd year & up	—Linda Hudd, Spring Valley
Garden - Horticulture	—1st year	—Judy Friedly, Delia
	—2nd year & up	—Louella Strynadka, Willingdon

FARM FORUM PROGRAM

The National Farm Radio Forum working in co-operation with the Canadian Council on 4-H Clubs produced a program beamed at 4-H across Canada. The subject was "How Can 4-H Be Improved?" In Alberta club members met on Forum Night and submitted written reports. This was the first attempt at such a program.

PROJECT HIGHLIGHTS

Beef Clubs: A record membership was enrolled in the three beef projects. A total of 3,600 head of stock were fed and cared for by 3,356 members. Carcass grading reports were obtained on all animals consigned to the major packing plants. An added experiment conducted in co-operation with the Western Stock Growers Association involved following some animals through to obtain the retail cut-out. This proved interesting though possibly not too practical. A new carcass ribbon brand reading "CANADA 4-H CHOICE" or "CANADA 4-H GOOD" was secured to comply with the recent changes in regulations for such brands in Alberta.

Dairy Calf Clubs: A total of 167 calves, at \$50.00 each, were supplied to clubs through the Dairy Heifer Calf Policy. This filled all orders. 44 delegates representing all clubs from Red Deer north were guests of the Alberta Dairymen's Association at their annual convention in Edmonton.

The Provincial 4-H Dairy Show attracted 56 entries from widely scattered points. Winners were:

Championship	—Brenda Young, R.R.#2, Calgary
Reserve Championship	—Terry Cornish, Crossfield
Calf Class	—Terry Cornish, Crossfield
Yearling Class	—Brenda Young, R.R.#2, Calgary
Showmanship	—Stanley Stannard, R.R.#2, South Edmonton

Swine Clubs: The swine club regulations were revised in 1962 to provide a graded system with junior, intermediate and senior projects. This was in keeping with similar changes that have been made in other clubs and to offer more training through the program in an attempt to maintain the interest of older members.

In the junior project members kept two weanling pigs. They increased this to four in the intermediate with one being a gilt. In the senior they had the option of a sow and litter or a minimum of six weanling pigs.

Field Crops Clubs: Project books were introduced into the junior section this year, these incorporated the old record books and the achievement day exhibit. The change appeared to be acceptable with the members concerned.

Winners in the Provincial Plot Competition were: Junior Project—Norman Schwindt, Spruce Grove; Intermediate Project—Laura Miller, Crossfield; Senior Project—Robert Carr, Okotoks.

The 19th Provincial Junior Seed Fair was held in conjunction with the Calgary Chamber of Commerce Seed Fair and Short Course. The Fair attracted 169 entries in the eleven classes offered.

A field crops member, Myron Zaharko of Bruderheim, brought credit to Alberta through winning the World Championship in Oats. In addition, Alberta 4-H members took ten of first eleven placings in 4-H wheat classes and first in Brome grass at the Royal Winter Fair.

Clothing Clubs: The clothing projects continued to hold the most appeal for girls. In keeping with the times emphasis on such things as buymanship, fabric, information, and wardrobe planning is increasing. Club achievement days often proved to be district highlights.

Food Clubs: Although the food clubs were less popular than some of the other projects, they continued to maintain their membership. The senior members in choosing their own projects showed particular interest in such fields as foreign cookery, breads and bread variations, and pastries. Many of the clubs expanded their program through secondary projects such as bake sales, teas, banquets.

Garden-Horticulture Clubs: A major change in projects was the offering of the garden and horticulture projects in one club. The revised and combined projects were made available to both boys and girls in a graded system starting at first year and progressing to fourth year and up. It was hoped this would overcome a demand that boys be allowed into this field. A

total of 74 boys were enrolled. The clubs were placed under the jurisdiction of the Home Economists with assistance from the District Agriculturists.

New Projects: The three projects in sugar beets which were offered on a pilot basis in 1961 were officially incorporated into the 4-H program in 1962. In addition pilot projects were established in the following in 1962.

(a) Sweet Corn:

A club was established at Taber in which the project was one acre of corn. The club was backed by the Cornwall Canning Company who bought the corn on contract from the club. This appeared to be a satisfactory project for the irrigated area.

(b) Wardrobe For Young Adults:

This project involving wardrobe co-ordination was introduced in the Calgary district during the fall as a possible senior project for girls in clothing clubs. Results of the project will not be known until next spring.

AGRICULTURAL ENGINEERING

The overall agricultural engineering activities, when measured in terms of volume remained about the same as last year, however, the pattern was changed to some degree. The number of farm calls increased 33%, but there was a reduction in the number of field days and demonstrations. The District Agriculturists requests for sewerage demonstrations were approximately one-half that of last year, but 51% of the farm calls were requests for information and surveys on sewerage and water installations.

The trend toward increased efficiency on the farm continued, which was indicated by the fact that 37% of the farm calls were made to provide information on farmstead mechanization and buildings. Seventy-nine drainage, gully filling and other conservation projects on individual farms were made. Many requests for surveys could not be accommodated. The demand for surveys for dams and dugouts was eliminated by the new province wide coverage by P.F.R.A.

The number of schools were reduced over the previous year, since the assistant engineer resigned and only one engineer was available to carry out the winter school program. An assistant extension engineer was appointed during the latter part of the winter.

The spring and summer programs were carried out with the aid of the same number of summer assistant engineers from the Schools of Agriculture. These assistants were located throughout the province as follows: one at Vermilion, two at Olds and one at Grande Prairie.

The rural welding clinic continued to be popular and the demand slightly exceeded the number of requests that were filled. A trial machinery service school was arranged and conducted at

the Olds School of Agriculture. This school ran one day a week for four consecutive weeks during the early part of the winter.

The extension engineers spent time with the Canadian Farm Building Plan Service in the production of plans and information which is distributed in every province. To avoid duplication, fewer plans and bulletins were produced locally by the engineers.

The extension engineers were unable to meet the increasing number of requests for their services. Agricultural Engineering activities were also carried out by the District Agriculturists, and for this reason the Agricultural Engineering events reported by the District Agriculturists will exceed the Agricultural Engineer's report.

The following tables summarize the Agricultural Engineering Activities for 1962:

SCHOOLS

	No.	Attendance
Farm Building	4	110
Home Building and Remodelling	4	202
Electrification	1	26
Welding Clinic	36	792
Sewerage and Plumbing	7	203
Machinery	1	21

DEMONSTRATIONS AND FIELD DAYS

Water and Sewerage	13	354
Forage	8	646
Machinery	8	285
Building Tours	5	228

GENERAL

Short Courses	9	678
Meetings	33	
Farm Notes	5	
Radio and TV Programs	5	
Plan Production	1	
Bulletins and Pamphlets	3	
Farm Calls	713	
Surveys	79	

DISTRICT AGRICULTURIST'S REPORT ON AGRICULTURAL ENGINEERING ACTIVITIES

	Demonstration and Field Days		Schools		Short Courses and Meetings	
	No.	Attendance	No.	Attendance	No.	Attendance
Machinery	10	784	13	258	20	1,418
Field Engineering	17	469	—	—	5	589
Buildings	15	293	5	313	4	288
Farmstead Mechanization, Rural Electricity, Water & Sewerage, Feed Handling	18	412	32	788	5	277

OTHER EXTENSION PROGRAMS AND ACTIVITIES

GENERAL

FARM LABOUR

No serious shortage of general farm workers was experienced in any areas of the province. There remains a chronic shortage of skilled farm machine operators, dairy workers and irrigators.

The temporary nature of some of this type of employment does not attract skilled workers.

General farm workers placed directly through District	
Agriculturists offices including Harvesters	789
Investigations regarding Farm Labour	191

All District Agriculturists worked closely with the local National Employment office and the bulk of the placements were referred to these offices.

FEDERAL PROVINCIAL FARM LABOUR COMMITTEE

The major activity of this committee was again the formulation of policies and the financing of the Indian Sugar Beet labour program. No serious problems were reported. The Growers and the Sugar Company both reported that the Indians had done a satisfactory job. Some minor problems occurred which were unavoidable with the movement of such a large body of workers and their families.

Hospital and medical accounts increased in total. The Indian and Northern Health Services shared these costs where treaty Indians were involved.

Total Indian workers engaged in sugar beet work	2,100
Number of Indian beet workers registered	1,900
Growers using Indian beet labour	551
Amount Indians earned for sugar beet labour	\$400,000
Amount Indians earned for general farm labour (estimated)	\$200,000

HARVEST LABOUR

It was unnecessary to organize any special Harvest Labour program either to bring in workers to the Provinces or to recruit them for Eastern Canada.

AGRICULTURAL SOCIETIES

Agricultural Societies gave a major share of their attention to summer fairs including "B" and "C" class fairs, Seed Shows, Bench Shows, Horticultural Shows, Livestock Shows and Sales, sponsorship of 4-H Club Activities, and Short Courses or Schools. Three societies conducted Farm and Home Improvement programs and one society sponsored a tillage field day. These activities are listed as follows:

Livestock shows and sales	49
4-H Club activities	43
Short courses and schools	32
Horticultural shows (bench shows)	28
Seed fairs	4
Farm and home improvement programs	3
Tillage field day	1
Others include Master Farm Family banquets, industrial and district tours and general meetings	81

Improvements

Continued improvements have been noted in buildings and grounds at a number of the fairs conducted by Agricultural Societies. Emphasis is again noted in the greater utility of buildings for year round community use.

Annual Meeting

This meeting saw an improved attendance by delegates and renewed interest in many matters concerned with the operation of Agricultural Societies and Fairs.

Officers elected for 1963:

Mr. Chic Miller	President
Mr. Jim Reid	Vice-President
Mrs. Doris Kirkwood	Secretary

Other Officers elected:

Art Schmidt	}	Northern Alberta
Glen Jones		
Henry Bjorkeland	}	Central Alberta
Murray Stauffer		
Jim Reid	}	Southern Alberta
Jim Stewart		

Societies Holding Fairs:

Class "B"

Camrose	Red Deer
Lethbridge	Vermilion
Lloydminster	Vegreville

Class "C"

Athabasca	Olds
Battle River	Pincher Creek
Benalto	Priddis-Millarville
Darwell	Vauxhall
Donnelly-Falher-Girouxville	Westlock
Goose Creek	Wetaskiwin
Grande Prairie	Wildwood
Medicine Hat	Willingdon

Others that held Fairs (not classified)

Mayerthorpe	Peace River
-------------	-------------

Societies Not Holding Fairs:

Alix	Lousana
Argyle	Nanton
Barrhead	Okotoks
Cardston	Plamondon
Central Alberta	Rimbey
Drumheller	Rocky Mountain House
Edmonton & District	Spirit River
Fairview	Stettler
Grand Centre	St. Paul
High Prairie	Taber
High River	Victoria Trail
Lamont	

MASTER FARM FAMILY PROGRAM

Nine families were nominated in four of the five regions in the Province. Each family was judged by at least one committee. Before receiving the award, the successful families were judged by the District Committee, the Regional Committee and finally the Provincial Committee. Four of these families received the Master Farm Family Award. The four awards for 1962 now bring the total up to 53 since the Program was initiated in 1949.

The families receiving the awards were: The George Dechant family, Fairview; Harold McLaughlin family, Spruce Grove; The Albert Kamps family, Lacombe; The N. Sigurd Nielsen family, Standard.

NAMES OF HOMES ACT

Interest has continued in the registration of the names of homes.

Number of homes registered in 1962	51
Total registrations for the province	461

PUBLICATIONS AND VISUAL AIDS

Publications:

The requests and distribution of all kinds of agricultural publications through the Extension Branch has increased again in 1962. This would indicate a real need for more information on the part of the reduced number of farmers in Alberta.

The figures below indicate the number of publications, from all sources, distributed by the Extension Branch at Edmonton:

Agricultural general	204,957
Homemaking	71,944
Individual building plans	19,863

Visual Aids:

The following equipment is available from headquarters and in the various Extension offices:

Movie Projectors	9
Slide Projectors	54
Public address systems	1
Film strip projectors	2
No. of meetings at which films were shown	135
No. of films shown by district agriculturists	362
Films owned	53
Films on loan	94
Total audience viewing films	14,895

Report of the Veterinary Services Branch

E. E. BALLANTYNE, V.S., D.V.M., F.R.S.H., Director
J. G. O'DONOGHUE, V.S., D.V.M., Assistant Director, Field Division
H. N. VANCE, V.S., D.V.M., Assistant Director, Laboratory Division
*G. S. WILTON, V.S., D.V.M., Veterinary Pathologist
*H. C. CARLSON, V.S., D.V.M., M. Sc., Veterinary Pathologist
*F. E. GRAESSER, B.S.A., V.S., D.V.M., Veterinary Histopathologist
*G. R. WHENHAM, V.S., D.V.M., Veterinary Microbiologist
*J. HOWELL, V.S., D.V.M., Veterinary Pathologist
G. A. CHALMERS, V.S., D.V.M., Veterinary Pathologist
J. P. BEST, V.S., D.V.M., Supervisor, Veterinary Inspection
W. P. BRISBANE, V.S., D.V.M., Supervisor, Brucellosis Control
G. E. HENNINGSEN, B. Sc., Laboratory Scientist
C. DAVIDSON, B. Sc., Laboratory Scientist
J. WOOD, Laboratory Technician

*in charge of a laboratory section

A. GENERAL

A classical example of a disease transmissible from animal to man occurred during the year: namely anthrax. The first case in April killed 11 cattle in a herd of 600 in the Consort district. No humans were involved. The second case was in buffalo in the North West Territories near Fort Smith where a known 271 head died. Two humans were infected but were successfully treated by the medical authorities. In both animal outbreaks the bacteriology and diagnosis was done at our laboratory, then confirmed and acted on by the Federal Health of Animals Division as anthrax is a reportable disease under the Federal Animal Contagious Diseases Act. These were the first cases of anthrax in this part of Canada since 1917. The buffalo case, although technically not in Alberta, was serviced through our arrangements for giving laboratory and consulting help to the Canadian Wildlife Service with wildlife problems in the Yukon and N.W.T. With all diseases transmissible from animal to man the logical control measures is to eradicate the disease in the animal population. Well known examples of such procedure are bovine tuberculosis and brucellosis control, complemented by pasteurization of milk. Thus control measures have an economic and public health value.

No epidemics of serious diseases occurred in poultry or animals in 1962. A study of the charts later in the laboratory report will show reductions in the incidence of many infectious diseases. In addition to anthrax, though, two diseases new to Alberta were diagnosed and caused some concern:—transmissible enteritis of turkeys and epizootic hemorrhagic disease of white-tail deer. Vibriosis of cattle appeared to be of increasing concern. This was difficult to evaluate completely with former years for a variety of factors. More incidents of antibiotic reaction in animals were reported. Again there were no cases of rabies although the disease appeared to be on the increase in Quebec, Ontario and Manitoba, with skunks being the major problem in the

last named province. Close liason was maintained with the Department of Lands and Forests in case rabies may break out again.

Alberta Regulation 433/61 requiring the licensing and humane slaughter procedures at country slaughter houses was enacted on January 1, 1962. Alberta Regulation 8/62 requiring licensing of lay outlets to handle livestock medicines became effective on April 1st. Mr. L. W. Paige, recently retired from the R.C.M.P., became the Livestock Medicine inspector on September 1st. These were the first such licences in Canada and in the main appeared to be well accepted by the trade.

The second Feed Industry Conference, jointly sponsored by the Extension Department, University of Alberta and the Canadian Feed Manufacturers Association (Alberta Division) and this Branch was held in Calgary. The high attendance indicated that the conference will become an annual event. Other provinces showed interest in copying this educational activity as has been done with our annual Hatcherymen's Short Course.

The Brucellosis Restricted Area program continued to expand with approximately 2,800,000 cattle under supervision; 443,128 calves were vaccinated. The value of this program in addition to protecting human health has meant millions of dollars to Alberta cattlemen. The Federal Brucellosis Control Area program of testing and removing reactors (with compensation) made good progress. The rate of infection found in Alberta of approximately .41% was $\frac{1}{3}$ of the national average of 1.5% further confirming the value of the Alberta Department of Agriculture program since 1949.

Veterinary inspection of livestock at Class D, E and F stockyards increased slightly to 747,150 head compared to 730,109 in 1961. The percentage rejected decreased from 1.61% in 1961 to 1.36% in 1962. This is true preventative veterinary medicine in removing diseased or suspected diseased animals from marketing channels, where animals go back to farms and feedlots. The owner can elect to take rejected animals home or send them for slaughter. Most rejected cattle went for slaughter and most rejected hogs were taken home for treatment. Three successful prosecutions were made for diverting "slaughter only" cattle to channels contrary to the regulations. The value of livestock inspected was between \$55,000,000 and \$65,000,000. The inspection service was appreciated by all concerned as being of real value in protecting purchasers from buying diseased animals which could seriously effect the financial success of their livestock enterprises.

The laboratory was extremely busy with 15,140 specimens being examined. 24,247 serological tests were made, 3,039 tissues examined histologically, 8,857 specimens examined bacteriologically 1,126 specimens processed for poisons, etc. The drop in blood tests will continue as the Federal Brucellosis Control Area Program expands. Technical advances in diagnosis were made possible by building a small up-to-date virus unit in space formerly used for housing cancer research dogs for the Faculty of Medicine. Further technical work was done on carbon mon-

oxide, industrial gases, new diseases, pesticides, etc. Monies were appropriated for a regional veterinary laboratory at Lethbridge which is expected to be opened in 1963. The Laboratory service continues to be the backbone of technical advances in disease diagnosis, prevention and control which will further expand in the years ahead.

The Certified Swine Health program, vital statistics, agricultural emergency measures and consulting services to others in the veterinary, agricultural, wildlife and public health fields continued to expand as veterinary medicine plays an integral and important role in an increasing number of fields and disciplines.

During the year an important announcement was made by agreement of the Ministers of Agriculture of the Western Provinces, that a Western Veterinary College would be built in the near future. The Alberta Veterinary Medical Association and many agricultural organizations in Alberta were very active to have the College located at the University of Alberta in the interests of the Alberta livestock industry; and with allied values to medicine, research, etc.

The valued services of Dr. C. H. Bigland were lost when he accepted a research position in poultry diseases at the Veterinary College, Davis, California. Dr. H. N. Vance was promoted to Dr. Bigland's position of Assistant Director, in charge of the Laboratory Division, after returning from post graduate training at the Veterinary College, Colorado. Dr. H. C. Carlson was awarded the M. Sc. degree at the University of Alberta on completion of his thesis on carbon monoxide poisoning. Mr. J. Wood returned after a year studying for his B.A. at the University of Utah. J. Bacle accepted a position with the Federal Fisheries Department in Quebec. His experience as a bacteriologist in our laboratory was invaluable in his obtaining this position. Dr. J. A. Tanner of the Veterinary Laboratory, Department of Agriculture, Regina spent a month in training at the Laboratory. Manitoba Department of Agriculture officials visited to study the veterinary services provided in Alberta with a view to long term planning in their province. Other important visitors were Dr. J. Done, of the Weybridge Research Institute in England and Dr. S. Okoski of the Tokyo Veterinary College.

Appreciation is expressed to the Extension, Livestock, Poultry, Field Crops, Dairy and Fur Farms Branches, practising veterinarians, municipal councils, feed manufacturers, biologists, R.C.M.P., University of Alberta, and many others for assistance in furthering the work involved in disease diagnosis, prevention and control.

Details of the various activities are outlined below with additional technical data to be included in the addenda of the Branch report.

B. FIELD SERVICES

Included the administration of official legislative programs, such as Brucellosis Control and Veterinary Inspection Services,

the operation of livestock health programs, the investigation of specific disease programs, field study projects and extension.

SUMMARY OF ACTIVITIES

Field Investigations		Inspections	
Cattle	39	Livestock Markets	172
Swine	14	Stockyards	231
Sheep	3	Livestock Medicines	210
Horses	2	Slaughterhouses	66
Poultry	4	Swine R.O.P. Bonus	15
Fur Animals	8	Swine Health Program	63
Wildlife	7	Brucellosis	48
TOTAL	77	TOTAL	805
Meetings		Lectures	
Brucellosis	14	University	58
Domestic Animals	18	Schools of Agriculture	42
Poultry	6	Others	30
Professional	11	TOTAL	130
Others	44		
TOTAL	93		
Individual Farm Visits			155

VETERINARY PERSONNEL

(a) **Students:** The number of Albertans attending veterinary colleges is as follows:

	1st	2nd	3rd	4th	5th	Total
Ontario Veterinary College	11	11	13	9	4	48
Washington	1	—	—	—	1	2
	12	11	13	9	5	50

Four of the 9 students who obtained 65% or higher in the pre-veterinary general science course at the University of Alberta were permitted to enter the 2nd year at the Ontario Veterinary College. One other enrolled in the pre-veterinary course at the University of Washington. Twenty had been in this pre-veterinary course at the University of Alberta. Twenty-one enrolled for the 1962-63 year.

A grant of \$300 a year is paid by the Department to those successfully completing each year of the college examinations. The object is to get more veterinarians for Alberta by helping to defray travelling expenses to the Ontario Veterinary College.

(b) Practicing Veterinarians:

The total rose to 145 making a net increase of 16 from 1961. Several vacancies still exist. The trend to multiple practices and clinics continued with the object of providing better service to the agricultural industry.

BRUCELLOSIS CONTROL

All of Alberta with the exception of Acadia and Lac la Biche areas was under the Provincial Brucellosis Restricted Area Plan. An additional 19 areas were gazetted by the Federal Department of Agriculture, making a total of 55 Federal Brucellosis Control Areas.

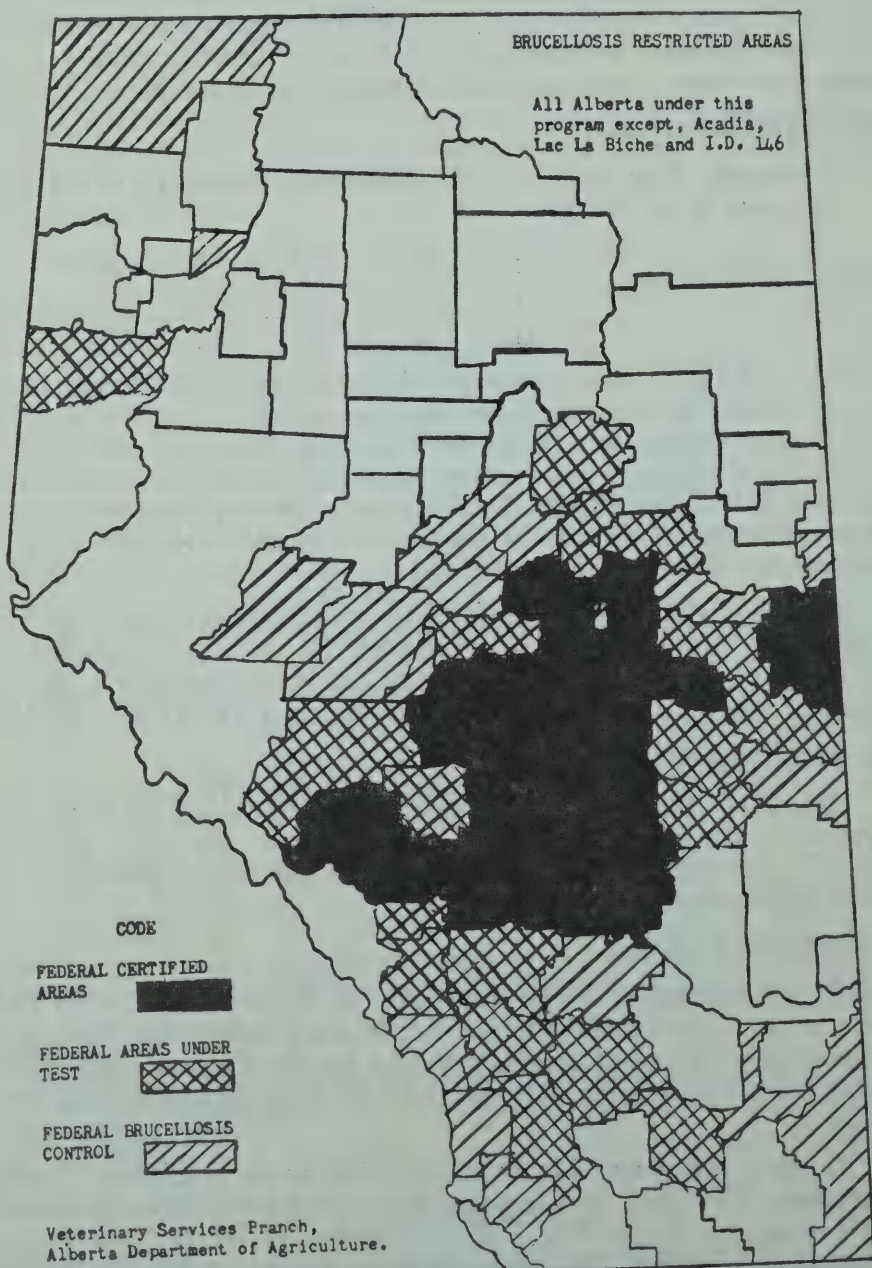
During the year 13 municipalities were declared Federal Brucellosis Certified free areas. The testing of cattle progressed in 18 other municipalities. The incidence of Brucellosis was .41 per cent of 1,300,000 cattle on premises tested under the Federal-Provincial Eradication Plan.

(a) Calfhood Vaccination

443,128 calves were vaccinated with *Brucella abortus* strain 19 vaccine which makes a total of 3,402,124 calves vaccinated since 1945. The continued export of cattle to the United States necessitated the issuing of duplicate vaccination certificates for some 28,000 cattle.

(b) Brucellosis Restricted Areas

Four areas were established as Brucellosis Restricted Areas, namely the Municipal District of Bonnyville No. 87 and Improvement Districts No.'s 27, 85 and 101.



The organization and administration of the Program in each municipality was carried out by the Agricultural Service Boards and Brucellosis Committees in Improvement Districts. The Brucellosis Program was administered by 139 Veterinarians and 63 Field Supervisors appointed Inspectors under the Livestock Diseases Act.

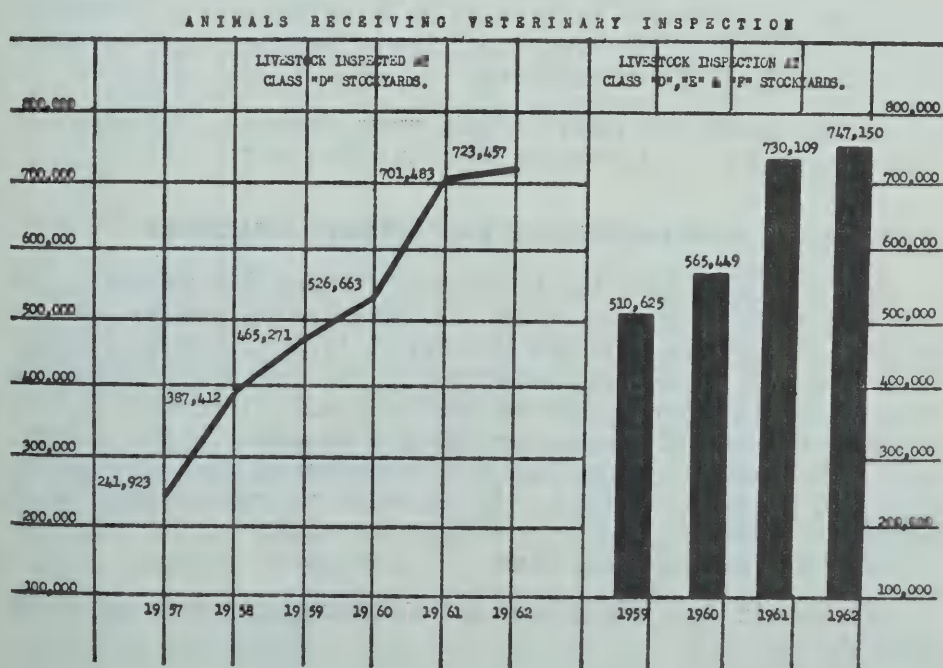
The progress of the Federal-Provincial Brucellosis Program is illustrated on the accompanying map.

VETERINARY INSPECTION SERVICE

Fifty-eight Livestock Markets were under Veterinary Inspection during 1962, an increase of three from 1961. For various reasons, four markets closed during the year. A total of 747,150 animals were inspected. 10,299 were rejected as diseased or suspected of having disease. 2,804 failed to meet the requirements of the Brucellosis Regulation and were marked for slaughter. 3,368 Man Days were required to provide livestock inspection, and 131 for sanitary inspection. The need for economy was met by reducing the number of sanitary inspections.

The main diseases encountered at the Auction Markets were: in Cattle—Mastitis, Cancer-Eye and Lump-Jaw; in Hogs—Rhinitis, Mange and Pneumonia; in Sheep—Dermatitis and Pneumonia and in Horses—Strangles.

In addition, 46 Class "C" and 282 Class "G" Stockyards were under supervision.



SUMMARY OF RESULTS OF VETERINARY INSPECTION

Type of Stockyard	"D"	"E"	"F"	Totals
No. of Stockyards	52	2	4	58
No. of Sales	2,642	19	11	2,672

INSPECTION

	Inspected	% of 1961	Rejected Diseased	% Rejected	Rejected Sec. 18
"D" Stockyards—Cattle	399,873	+14.55	3,438	0.86	2,803
Swine	276,296	- 8.86	6,201	2.24	—
Sheep	36,690	- 7.20	436	1.19	—
Horses	10,953	+ 7.69	5	0.09	—
TOTALS	723,457	+ 3.13	10,084	1.39	2,803
"E" Stockyards—Cattle	15,726	- 29.79	109	0.69	0
"F" Stockyards—Cattle	7,967	+24.94	36	0.45	1
GRAND TOTALS	747,150	+ 2.33	10,229	1.36	2,804

Note: Cattle rejected under Section 18 were marked for slaughter only because the owners declined to have them blood tested for Brucellosis.

THE LIVESTOCK MEDICINE REGULATIONS

These Regulations came into effect April 1, 1962, and Alberta Regulation 1/60, concerning the sale of injectable veterinary biologics was cancelled.

The primary purpose was to protect the purchaser of livestock medicines and to discourage such items being regarded as just additional merchandise. Regulations included approved drug schedules, handling and storage requirements, including refrigeration of perishable items, and the keeping of accurate records.

An Advisory Committee composed of representatives of the Alberta Pharmaceutical Association, the Alberta College of Physicians and Surgeons, the Alberta Veterinary Medical Association, and the Alberta Federation of Agriculture was formed to review the regulations and medicine schedules, and to make recommendations to the Minister.

In this year, 292 retail outlets were licensed, 210 of which were visited by the Livestock Medicine Inspector.

LICENSING OF SLAUGHTERHOUSE AND HUMANE SLAUGHTER

Regulations under the Livestock Diseases Act requiring the licensing of slaughterhouses and the adoption of humane slaughter methods became effective January 1, 1962. Acceptable stunning methods were those enforced in all abattoirs under the Federal Government inspection, and originally recommended by the R.S.P.C.A. Official representation was made by the Alberta Locker Association protesting the exclusion of the rifle as an approved stunning method. As a result no action was taken against the use of the rifle, pending an official ruling from the Society and Federal authorities.

Ninety-six slaughterhouses were licensed, sixty-six of which were visited.

AGRICULTURAL EMERGENCY MEASURES

Saving human lives has first priority in Emergency Measures activities in case of a national emergency. The provision of food is the second priority and in fact it is an integral part of the first.

This food would have to come from farm production. According to calculations Alberta and the rest of Western Canada could have vast food resources that would be uncontaminated by radioactive fallout. But some would be contaminated directly; and indirectly, through the soil, forage, and animals raised in a fall-out area. Normal marketing and processing could be seriously affected.

The Alberta Department of Agriculture Emergency Measures Plan was designed to take care of the problems mentioned above as well as assisting in case of biological and chemical warfare. The plan was the first one designed for agriculture in Canada and served as a model for other provinces.

Lectures on the Alberta Plan were given to over 2,300 people by the Director at the Alberta Civil Defence Training School, Edmonton; Canadian Civil Defence College, Arnprior; Convention of Alberta Registered Nurses, short courses and farm groups. Additional groups were addressed by veterinarians and district agriculturists.

Most of the municipal organization was completed whereby Agricultural Service Boards, plus the Field Supervisor and local veterinarian are utilized.

All professional staff were assigned to duties and notified where to report to in case of an emergency.

EDUCATIONAL COURSES

Individuals do a better job of disease prevention when well informed. The second annual 2-day Feed Industry Conference was held in cooperation with the Industry and the University Department of Extension. The twelfth 3-day Hatcherymen's course was held with the Livestock and Poultry Branch cooperating. Assistance was also given to Extension, Fur Farm Branch and others.

CERTIFIED HEALTHY HERD PROGRAM

Twenty-three purebred swine herds participated in this breeder government cooperative program. Health standards were based on sixty-three unannounced herd inspections, and the examination of forty-two casualties and seven hundred and sixty-six specimens from a percentage of market hogs.

The first herd certification was granted to two herds and an official supervised status, indicating an excellent health status was granted to an additional seven herds.

VITAL STATISTIC REPORTING

To complement information gathered from laboratory submissions and contacts with livestock owners, a system of morbidity and mortality reporting was maintained. Selected veterinary practices cooperated in this program.

Monthly vital statistic returns were processed covering calls to 10,915 premises representing 32,849 animals requiring veterinary attention.

Of special interest were the heavy losses in beef cows in the late winter and early spring, as manifested by Downer Cows, the result of the shortage of winter feed. A similar situation occurred in the winter of 1953-54. Bovine Pulmonary Emphysema also showed an unusually high incidence in the summer and early fall.

Equine Encephalomyelitis was not reported.

TUBERCULOSIS OF POULTRY AND SWINE

The notification of hog shippers whose animals were found to have extensive lesions of Avian Tuberculosis at Packing Houses under Federal meat inspection was continued. Individuals were sent an outline of control recommendations. The 35% incidence of 1950 has been reduced to approximately 11%. In 1962, Federal authorities showed an interest in adopting this program. Avian Tuberculosis is a problem in the Western Provinces.

FEDERAL T.B. RESTRICTED AREAS

Although all the municipal districts of Alberta are Federal T.B. Restricted or Certified Areas, the Health of Animals Division, Federal Department of Agriculture, continues to systematically re-test all cattle. The aim is to protect human and livestock health as well as facilitate cattle marketing. The incidence of the disease in Alberta cattle has always been low.

C. LABORATORY SERVICES

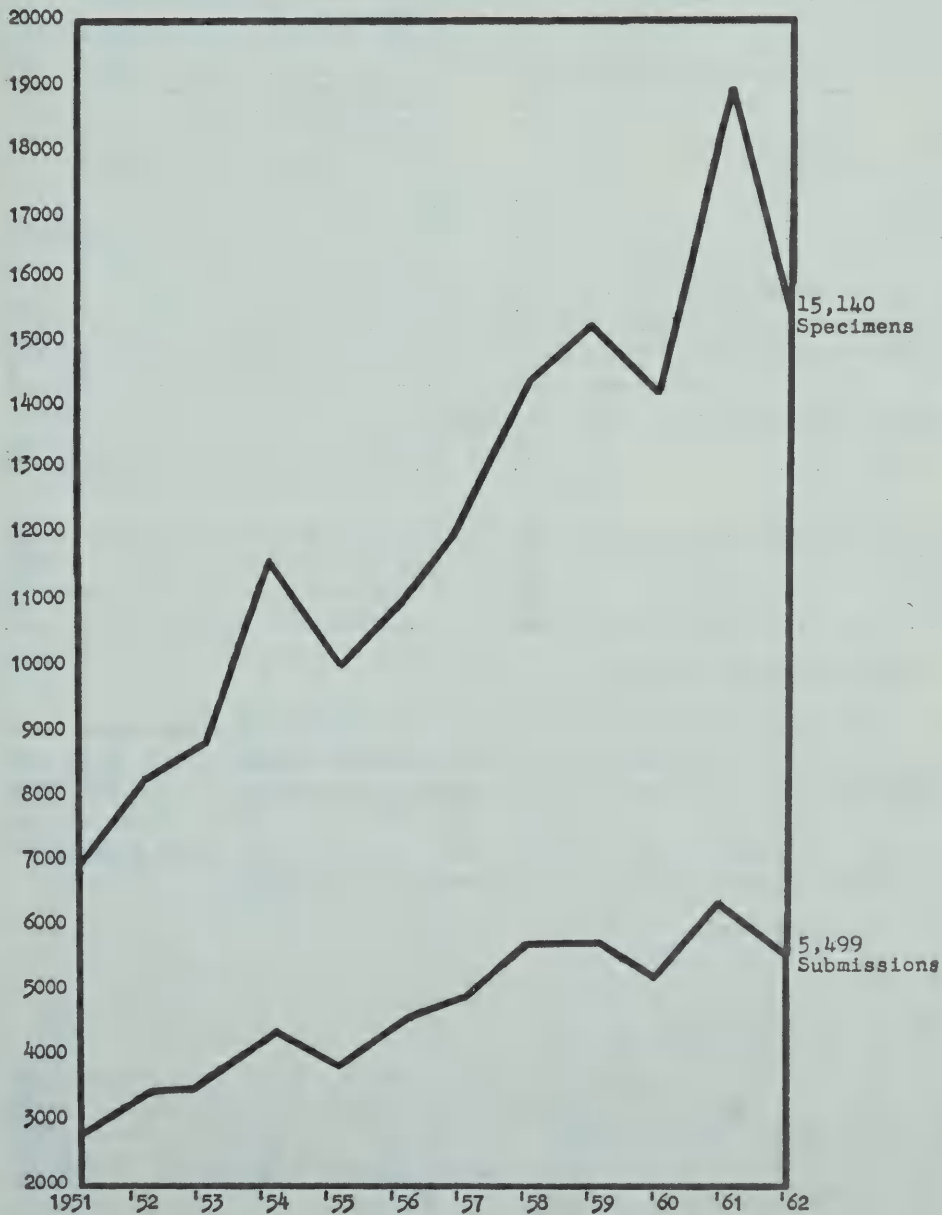
The main responsibility of the laboratory was to provide a diagnostic service to the livestock industry. The services provided here include the use of equipment and techniques not available in veterinary practices. To have maximum value in disease control, the reports of examinations must be accurate, complete, and dispatched as quickly as scientific methods permit. Continual improvements in techniques, staffing and equipment were made toward this end. To keep abreast of new disease situations and new diagnostic methods, a program of weekly films, bi-monthly seminars, and conferences, was carried on for the professional staff. A modest library of 18 periodicals in veterinary medicine and allied fields also aided us in meeting this responsibility.

Additional space was provided by the completion of the unit for virus studies and conversion of part of the barn to laboratories and offices. The former enabled us to enlarge the scope of diagnostic work with virus diseases, particularly virus pneumonia of pigs. The new space in the barn includes laboratory space for investigation of specific diagnostic problems along with additional offices and storerooms.

Examination of specimens at the laboratory was aided by work in specialized areas at a number of other institutions. We gratefully acknowledge the assistance of the Provincial Analyst; Alberta Public Health Laboratory; Faculties of Zoology and Agriculture, University of Alberta, the Animal Diseases Research Institute; Ontario Veterinary College and Ontario Agricultural College.

SPECIMENS

The following graph indicates the general increase of the numbers of submissions and specimens examined from 1951 to 1962. A total of 15,140 specimens in 5,499 submissions were examined in 1962.

TOTAL NUMBERS OF SPECIMENS AND SUBMISSIONS**ANIMAL AND POULTRY****(EXCLUDING BLOOD)**

Domestic Specimens

Cat	105
Cattle	2,442
Chinchilla	60
Dog	507
Goat	5
Horse	161
Mink	105
Nutria	2
Sheep	166
Swine	2,268

SPECIES

Budgerigar	57
Canary	3
Chickens	2,695
Cockateal	2
Duck	29
Goose	22
Parakeet	1
Pigeon	7
Parrot	1
Turkeys	2,570

Wildlife Specimens

Antelope	9
Barbary sheep	2
Bat	1
Beaver	7
Bighorn Sheep	8
Black Fallow Deer	1
Blacktailed Deer	1
Bobcat	1
Buffalo	3
Bush-baby	2
Caribou	2
Chinese Water Deer	1
Cougar	1
Coyote	21
Deer	31
Elk	4
Ferret	3
Fish	2
Gopher	3
Lion	3
Lynx	4
Monkey	15
Moose	37
Mule Deer	9
Opposum	4
Otter	3
Rocky Mountain Goat	2
Skunk	1
Squirrel	1
Squirrel Monkey	2

Tapir	1
Timber Wolf	2
Wallaby	1
Whitetail Deer	1
Yak	1
Zebra	1
Cedar Wax Wing	4
Duck	2
Eagle, Golden	1
Egret	1
Falcon, Peregrine	2
Finch	1
Flamingo	2
Goose, Canada	5
Grosbeak, Evening	2
Grouse, Shortail	1
Guinea Fowl	6
Hawk	1
Heron	3
Ibis, Glossy	1
Magpie	1
Owl	5
Partridge	3
Peafowl	4
Pelican	1
Pheasant	186
Ruff	1
Sandpiper	2
Stork	8
Swan	5

Laboratory Animals

Guinea Pig	7
Hampster	10

Rabbitt	105
Rat	18

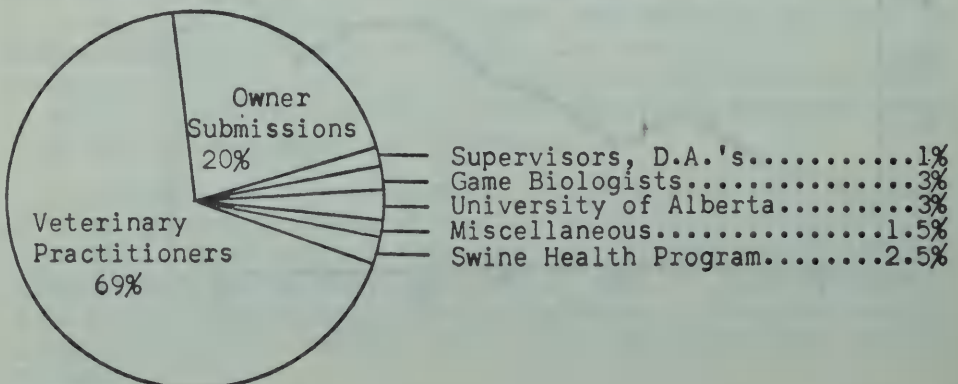
Others

Blood	237
Eggs	374
Fecal	497
Feed	299
Fluff	582
Meat	162

Meat Meal	29
Miscellaneous	226
Milk	726
Semen	33
Urine	53
Water	198

ANIMAL DISEASE SECTION

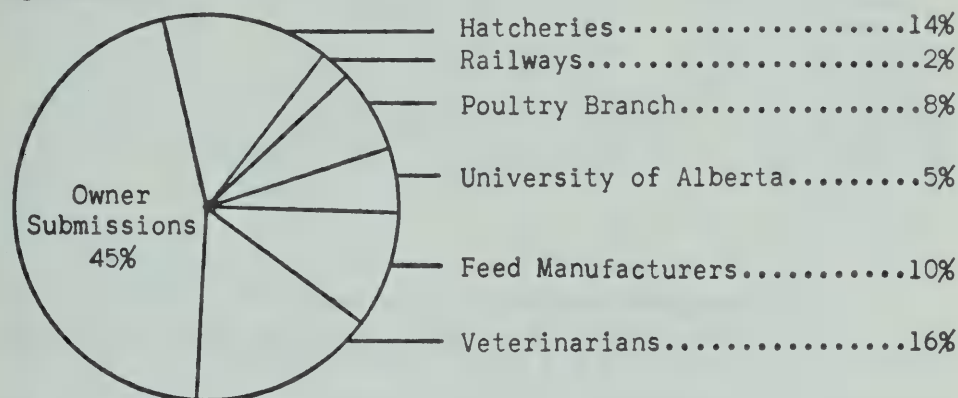
The Animal Disease Section examined 7,972 specimens from a total of 3,160 consignments or premises. This figure does not include the 22,911 bevine blood samples examined for Brucellosis. The circle graph reveals that slightly over 20% were owner and miscellaneous submissions while nearly 80% were submitted by Veterinarians and other professional groups.



POULTRY DISEASE SECTION

The Poultry Disease Section is responsible for the diagnosis of diseases in birds. 1,722 submissions were received; 6,140 specimens from 48 avian species were examined.

The chart illustrates the distribution of the submitters of the specimens.



PROMINENT DISEASES

Anthrax was diagnosed by this laboratory in bovine specimens from one farm in the Consort area, and in bison specimens from Wood Buffalo Park. These were the first cases of the disease in Alberta since 1917. The source of the infection was not definitely located, but a close surveillance for additional outbreaks is being maintained. The Federal Health of Animals Division is responsible for Anthrax control measures.

Transmissible enteritis of turkeys was a major disease problem in Alberta for the first time with poults from 97 premises showing infection. The first cases were diagnosed early in the hatching season. Within a few weeks poults were affected in widespread parts of the province. It is likely that this disease will continue to be a problem in future years.

Figures in the following section represent the number of premises on which the conditions were diagnosed, not the number of individual animals affected (1961 figures given in brackets).

Swine

Oedema Disease	59	(86)
Swine Erysipelas	34	(37)
Mulberry Heart Disease	13	(19)
Escherichia Coli Infections	■	(15)
Pneumonia and Pasteurellosis	84	(110)
Gastroenteritis	54	(55)
Necrotic enteritis	28	(37)
Glasser's disease	24	(43)
Salmonellosis	20	(40)
Atrophic Rhinitis	11	(21)
Anemia	27	(43)

Sheep

Enterotoxemia	4	(4)
Pneumonia and Pasteurellosis	24	(39)
Stomachworms & tapeworms	12	(10)
Lungworms	7	(8)

Canine

Infectious Canine Hepatitis	10	(8)
Distemper	9	(19)
Nephritis	14	(5)
Pneumonia	6	(9)

Mink

Distemper	2	(17)
Virus enteritis	1	(1)
Botulism	1	(0)

Cattle

Blackleg	47	(51)
Malignant oedema	18	(22)
Mixed Clostridium Infections	63	(41)
Enterotoxemia	18	(54)
Mastitis	116	(113)
Pneumonia and Pasteurellosis	82	(79)
Mucosal Disease	12	(9)
Pulmonary Emphysema	16	(12)
Salmonellosis	15	(3)
Scours	28	(12)
Navel Infection	10	(9)
Vitamin A Deficiency	28	(26)
Lungworms	10	(1)
Anthrax	1	(0)

Poultry

Transmissible enteritis	97	(0)
Air Sac Infection	145	(250)
Chronic Respiratory Disease	100	(66)
Coccidiosis	48	(51)
Avian Encephalomyelitis	4	(4)
Leukosis	67	(86)
Paratyphoid	78	(157)
Pullorum	12	(37)
Avian Tuberculosis	54	(58)

SEROLOGY

The following chart outlines the serological tests conducted including sera sent to the Alberta Public Health Laboratory for Leptospirosis testing.

Brucellosis	Bovine	Porcine	Equine	Buffalo	Goats	Ovine	Mink	Canine	Poultry
Provincial	17,285	62	1	7	12	11	—	—	—
Brucellosis Federal	5,533	—	—	—	—	—	—	—	—
Vibriosis									
Mucus	432	—	—	—	—	—	—	—	—
Leptospirosis	96	72	3	2	—	—	—	4	—
P.P.L.O.	—	—	—	—	—	—	—	—	468
Pullorum	—	—	—	—	—	—	—	—	226
Newcastle	—	—	—	—	—	—	—	—	9
Botulism	—	—	—	—	—	—	24	—	—
Total	23,346	134	4	9	12	11	24	4	703
GRAND TOTAL									24,247

The percentage of positive reactors to the Brucella test was 1.7%, a decrease of 1% from 1961. Brucella tests at Auction Markets amounted to 11,772 with 1.25% reactors.

Mucus agglutination tests for Vibricesis were conducted on specimens from 89 premises, 29 of which were positive.

HISTOPATHOLOGY

The number of tissues processed for histopathological examination amounted to 3,039, which represents a decrease of 4% when compared with the previous year's work. From these, approximately 3,200 sections were prepared and studied microscopically. The following table illustrates the species of origin and number of submissions received from each.

SPECIES							
Domestic Animals		Fur-Bearing Animals		Miscellaneous		Poultry	
Species	No.	Species	No.	Species	No.	Species	No.
Bovine	590	Mink	153	Wildlife	86	Chickens	766
Canine	440	Chinchilla	16	Zoo	34	Turkeys	108
Equine	99			Laboratory	48	Misc	51
Feline	127		169				
Ovine	82				168		925
Porcine	439						
Total	1,777						
GRAND TOTAL							3,039

BACTERIOLOGY

Most of the animal and poultry accessions were routinely examined for pathogenic bacteria. The bacteriology section received 4,103 specimens from the animal pathologists and 3,754 from the poultry pathologists. These examinations included bacteriological, serological, microscopic, chemical, animal inoculation, and other procedures. The following table illustrates the work performed:

Bacterial Examinations	7,051	Urinalysis	69
Fecal Examinations	542	Mastitis Tests	571
Blood Counts	128	Cuboni Pregnancy Tests	23
Skin Scrapings	55	Serological Tests	718
TOTAL SPECIMENS RECEIVED			8,857

Several bacteriological projects were conducted which are reported elsewhere. The chart to follow shows the work done on reproductive diseases with findings from fetus examinations and vibrio tampon tests.

Feti	Total	Vibrio	Brucella	Strep	Coryne	Others	Negative
Bovine	212	12	6	4	1	1	186
Porcine	18	—	—	—	—	2	16
Ovine	11	1	—	—	—	—	10
Equine	5	—	—	1	—	—	4

A total of 432 Vibrio tampons, representing 89 premises, were examined with positive reactions in samples from 29 farms. Together with fetus examinations, 41 farms were shown to have Vibriosis or a strong suspicion of it.

Other specimens examined included:

Milk Samples	220	Intestinal Contents	141
Meat Meal	29	Semen Samples	33
Fluff Samples	582	Miscellaneous	164
Media used: Plates			36,000
Liquid			185,000 cc.
Vaccine and Bacterin Production			15,368 cc.
Experimental Animals Inoculated (Whole Laboratory)			1,217
Guinea Pigs	330	Pigs	4
Mice	716	Deer	1
Rabbits	3	Sheep	4
Chickens	156	Cattle	5

SALMONELLA

Infections with this group of organisms are referred to as "paratyphoid infections", and involve many species including man. The following table illustrates the number of such infections found in the various species.

SALMONELLA INFECTIONS—1962

(1961 figures in brackets)

Turkey	66 (131)
Pig	23 (46)
Cattle	25 (7)
Chicken	8 (26)
Cat	3 (0)
Duck	3 (1)
Pheasant	2 (0)
Mink	2 (2)
Beaver	2 (0)
Sheep, Horse, Dog, Antelope, Porcupine, Goose, Snipe and Ibis	1 each 8
TOTAL	147 (221)

In addition three Salmonellas were isolated from meat meal samples.

VIROLOGY

The newly completed virology laboratory was put into operation and handled a total of 130 specimens by a variety of techniques which included animal inoculation, egg inoculation, filtration, high speed centrifugation and special stains. Diseases confirmed included infectious bronchitis, psittacosis, avian encephalomyelitis and canary pox.

PARASITOLOGY

During routine examination of carcasses, parasitism was diagnosed in a total of 97 animals and 82 birds. In addition, 497 samples of feces were examined for evidence of internal parasites.

Internal and external parasites continue to cause serious economic losses in spite of the introduction of more effective drugs over the last few years. Parasitism often results in loss of life. Perhaps more important is the widespread and insidious lowering of feed conversion levels. Unless proper precautions are taken, more intensive methods of livestock production may increase the danger from parasites.

There appears to be a gradual increase in the number of diagnosed cases of lungworm infestations in cattle and sheep.

TOXICOLOGY

A total of 1,126 laboratory submissions were referred to the Provincial Analyst for toxicological examination. Of these, 729 were animal and poultry specimens from cases of suspected poisoning. The remainder consisted of water and feed samples which were suspected of producing harmful effects in livestock.

The following table illustrates the work done and results obtained from these examinations.

TOXICOLOGICAL EXAMINATIONS						
Poison	Bovine	Canine	Porcine	Poultry	Total Poison	Grand Total
Arsenic	6	2	2	2	12	—
Dicoumarin (sweet clover)	1	—	—	—	1	—
Lead	4	—	—	—	4	—
Mercury	11	4	1	2	18	—
Nicotine	—	1	—	—	1	—
Nitrate	4	—	—	—	4	—
Petroleum	2	—	—	—	2	—
Pentachlorophenol	1	—	—	—	1	—
Salt	1	—	1	—	2	—
Strychnine	1	25	—	1	27	—
1080	—	2	—	—	2	—
					74	74
Negative for poisoning						655
Feed Negative	182	Contaminated	25			207
Water Satisfactory	153	*Unsatisfactory	37			190
GRAND TOTAL						1,126

* Glauber salt 18, Salt 6, Fluorine 3, Soda 5, Nitrate 4, Iron 1.

SPECIAL INVESTIGATIONS

Disease problems occasionally arise which cannot be adequately investigated by routine procedures. Within the limit of facilities and time available the following special investigations were conducted:

Salmonella in meat scrap.

Fluff testing in hatcheries.

Irradiation of embryonated chicken eggs.

Carbon monoxide poisoning in chicks.

Moniliasis in chicks and poults.
 Nitrate poisoning of cattle.
 Bovine enterotoxemia.
 Virus enteritis in mink.
 Botulism in mink.
 Anthrax in cattle and buffalo.
 Epizootic hemorrhagic disease of white-tail deer.
 Chilling and overheating in chicks.
 Air pollution with hydrogen sulfide and sulfur dioxide.
 Downer cow problem associated with winter feed shortage.
 Vibriosis of beef cattle on community pastures.
 Efficiency of strain 19 Brucella vaccine.
 Shock reaction to antibiotic injections in auction markets.
 Leptospirosis in cattle. (Suspected)

CORRESPONDENCE AND COMMUNICATION

Full use of the services of the Veterinary Branch necessitates correspondence concerning diagnoses and recommendations with veterinarians, livestock owners or their agents. Such communications included: (1961 figures given in brackets).

Letters	26,689	(25,755)
Telegrams	283	(503)
News Releases	20	(36)
Film Showings	3	(24)
Radio and TV Interviews	13	(14)
Transparencies and Slides	50	(125)
Photographic Prints	150	(200)
*Scientific Papers	4	(12)

*Papers Published in Scientific Journals.

1. "Abdominal Hernia in Turkey Poults"—H. C. Carlson.
2. "Salmonellosis of Animals in Alberta, 1949 to 1960"—C. H. Bigland, G. S. Wilton, H. N. Vance and H. C. Carlson.
3. "Salmonella Reservoirs in Alberta"—C. H. Bigland.
4. "A Pox-Like Infection of Canaries: "Report of an Outbreak"—C. H. Bigland, G. R. Whenham, F. E. Graesser.
5. "Effects of Sulfur Dioxide on Guinea Pigs and Swine"—J. G. O'Donoghue and F. E. Graesser.
6. "An Osteolytic Mucor Mycosis in a Penguin"—C. H. Bigland, F. E. Graesser and K. S. Penniford.

In addition, several thousand bulletins on veterinary subjects were distributed.

Report of the Schools of Agriculture and Home Economics Branch

J. E. HAWKER, B.Sc., B.A., P.Ag., Superintendent

J. E. BIRDSALL, M.Sc., P.Ag., Principal, Olds School

W. S. BARANYK, B.Sc., B.Ed., P.Ag., Principal, Vermilion School

V. W. OSBALDESTON, B.E., B.Ed., Principal, Fairview School

For the 1961-62 term students were graduated at the Olds and Vermilion Schools on April 4th, and at Fairview on June 29th, 1962. On these dates Diplomas of Graduation were presented as follows:

	Olds	Vermilion	Fairview	Total
Agriculture	62	59	15	136
Home Economics	10	9	*N/O	19
Dressmaking	*N/O	*N/O	4	4
	72	68	19	159

*Not Offered

The total of 159 graduates is seven above the total of 152 graduated in 1961.

The annual staff conference for teaching perscnnel at all schools was deferred until April, 1963. This follows a staff decision at the last conference favoring a post—rather than a pre-school year meeting.

There were fourteen teaching staff changes in 1962. Of these seven left to take other employment, two were granted leave for professional improvement, three were new appointments in connection with the new program and two transferred to other employment within the Department. After completing a year's training at the University of Alberta under Leave for Professional Improvement regulations, Mr. J. T. Lancaster returned to Fairview and Mr. B. J. Godwin to the Vermilion School.

Mr. R. M. Gratz of the Vermilion staff and Mr. J. P. Tait of Fairview were granted leave for professional improvement in the fall of 1962. Mr. N. N. Bentley, Principal of the Vermilion School since 1945 accepted a permanent appointment with the Food and Agriculture Organization in Rome, Italy. He was replaced effective November 1, 1962, by Mr. W. S. Baranyk who had been Instructor in Horticulture and Botany at the Olds School.

In order to provide greater flexibility within courses and facilitate the offering of specialized training, a sessicnal system was introduced in the fall of 1962 at Olds and Fairview. Each session extends just over three months and is terminal. Two such sessions were offered in the 1962-63 school year at Olds and Fairview. Courses at these schools which ran longer than two sessions included Commercial, Clothing, Automotives and Food

Service Management. At Vermilion, the traditional school year was maintained during the 1962-63 school year (October 22nd to April 5th).

The general course in Home Economics was retained only at Vermilion and as a one year course. It was replaced at Olds and Fairview by special courses in the areas of Clothing, Foods and, to some extent, Commercial.

BOARD OF AGRICULTURAL EDUCATION

The annual meeting of the Board was held in the Legislative Committee Room May 11th, 1962. Honourable L. C. Halmrast, Minister of Agriculture, chaired the morning session and named Mr. R. M. Putnam, Deputy Minister of Agriculture, as chairman for the afternoon session.

The chairman opened proceedings with general remarks regarding the Schools of Agriculture. He, personally, did not feel that any school would be closed if enrolment was strong. In his opinion an auditorium would be built at Fairview and further shop facilities added there, if present enrolment was maintained. He commented favorably on the new Plant Science and Dairy Building at the Olds School.

He was of the opinion that, if the Vermilion School was to continue to operate, building expenditures would have to be made there involving new construction similar to that at Olds. He reported that some still contend vocational agricultural education should be in the high schools but, he stated, "results across Canada to-date do not confirm this view". He felt that the Schools of Agriculture are doing a job which it is impossible to do in the high schools.

In conclusion, the Minister paid tribute to graduates of the Schools of Agriculture as leaders in their respective communities. He felt that the Fairview School would continue to operate because of its strategic location where it could effectively serve the Peace River area.

Several pertinent comments were made in the discussion following the Minister's statement. Reviewing briefly the situation at Fairview, Mr. Osbaldeston stated that, because of timetable differences between the local high school and the School of Agriculture, there was little or no opportunity to integrate academic and vocational agricultural subjects. He went on to say that registration in agriculture had been adversely affected by the uncertainty of the shop reconstruction program in the early part of the term. He felt that the construction of a new vocational school at Grande Prairie would not affect agricultural courses at Fairview.

Mr. Putnam stated that, if the Vermilion School is to operate over the next three years, the undertaking of a major building program is essential.

Mr. Merkley felt that, with the emergence of new vocational schools throughout the province, the future of the Schools of Agriculture must be faced realistically and soon.

Motions were passed calling for the establishment of a committee chaired by the Superintendent of Schools of Agriculture. The committee was asked to draught proposals relative to the Schools of Agriculture for presentation to the Board. This meeting would be followed immediately by a joint meeting of the Board and the Cabinet, in the fall of 1962, to consider the proposals further.

A proposed program of courses for Schools of Agriculture for the 1962-63 term was adopted after some revision of starting and termination dates. Details of the changes may be stated briefly as follows:

Olds School

Agriculture—1st Session—September 24 to December 19, 1962.
2nd Session—January 7 to April 5, 1963.

Clothing and Design—1st Session—September 24 to November 30, 1962.
2nd Session—December 4 to March 20, 1963.
3rd Session—March 25 to June 21, 1963.

Commercial—September 24, 1962 to June 21, 1963.

Vermilion School

Agriculture—October 22, 1962 to April 6, 1963.

Home Economics—October 22, 1962 to June 21, 1963.

Commercial—October 22, 1962 to June 21, 1963.

Commercial/Home Economics Combination—October 22, 1962 to June 21, 1963.

Fairview School

Agriculture—1st Session—October 15 to December 19, 1962.
2nd Session—January 7 to April 5, 1963.

Automotives—October 15, 1962 to June 21, 1963.

Welding—Dates of six-week courses to be announced.

Food Service Management—September 24, 1962 to June 21, 1963.

Dressmaking—September 24, 1962 to June 21, 1963.

Commercial—September 24, 1962 to June 21, 1963.

***Academics**—1st Session—September 4, 1962 to January 29, 1963.
2nd Session—February 1 to June 28, 1963.

*Academic students take all of their classes at the Fairview High School.

School regulations pertaining to the use of liquor by students were revised allowing greater discretionary powers to the Principals in dealing with infractions of such regulations.

As recommended by the Board in 1961, board and room charges to students were increased from \$40.00 to \$50.00 a month and for teaching and administrative staff charges for board and room were raised from \$45.00 to \$55.00 a month. Both increases were effective September 1st, 1962.

The 1962-63 Term

Because of difficulty in recruiting suitable staff, the opening of all girls courses at Olds and Fairview was deferred from September 4th to September 24th, 1962.

Enrolment at each School for the 1962-63 term was as follows:

Course	Sept. 24/62 Olds	Oct. 22/62 Vermilion	Oct. 15/62 Fairview	Total
Agriculture	115	134	30	279
Automotives	*N/O	*N/O	7	7
Welding	*N/O	*N/O	10	10
Home Economics	*N/O	8	*N/O	8
Commercial	13	13	9	35
Home Economics— Commercial	*N/O	7	*N/O	7
Clothing	14	*N/O	*N/O	14
Foods	*N/O	*N/O	6	6
Total Vocational	(**133) 142	(**130) 162	(**53) 62	(**316) 366
Academic	*N/O	*N/O	28	28
Total Enrolment	142	162	90	394

*N/O—Not Offered

**1961-62 Enrolment

Assistance Granted to Students at Schools of Agriculture Under the Students Assistance Act During the 1961-62 School Year.

	Olds	Vermilion	Fairview	Total
Loans	\$1,455.00 (8)	\$3,840.00 (18)	\$1,725.00 (8)	\$7,020.00 (34)
Loan Remissions	482.50 (4)	1,161.25 (10)	200.00 (2)	1,843.75 (16)
Prizes—\$50 each —	300.00 (6)	300.00 (6)	200.00 (4)	800.00 (16)
TOTAL	\$2,237.50	\$5,301.25	\$2,125.00	\$9,663.75
Actual number of students assisted	13	24	12	49

MAINTENANCE AND CONSTRUCTION

At the Olds School major maintenance included remodelling of the old bull barn and attached laboratory for use as a maintenance shop; remodelling of the pump house; exterior painting of the Mechanics Building and the Dairy Building; installation of 75 combination windows in the dormitory building and construction of corridor through the library making it possible to use part or all of the third floor of the girls residence for boys. Major construction items included completion of the Plant Science Building and the milking parlor and loafing barn portions of the Dairy Building; installation of nine street lights and laying of cable for other lights on the campus; new steam lines were laid to allow for present and future expansion; a start was made on the installation of one new boiler and automatic equipment in the heating plant; the feed plant was completed; a one-stall garage and two pole-frame livestock sheds were built.

At the Vermilion School no major maintenance or construction jobs were provided for. Normal maintenance of all buildings was carried out.

At the Fairview School major maintenance included electrical alterations to meet requirements of the electrical code; benches and cupboards were built and installed in the Mechanics Building; the herdsman's residence was stuccoed; concrete repairs were made in the Poultry House, Beef and Hog Barns and on sections of sidewalk and curbing; the program of replacing corroded and leaking galvanized piping with copper was continued. Major construction was confined to replacement in part of the burned Mechanics Building. Started in November, 1961, the new structure was occupied February 12, 1962. It was not finally completed until August, 1962.

PROGRAM BEYOND THE SCHOOL TERM

Very full use was made of facilities at all three schools in 1962 beyond the regular school term. Activities of this type were kept to a minimum at Fairview due to the continued lack of auditorium facilities.

Regular summer programs at all three schools included one week programs for 4-H Club members. At Vermilion, Farm Women's Week was not held for lack of sufficient applicants. Other groups accommodated at one of the three schools included: Alberta Dairymen's Association, F.U. and C.D.A. Teen Camps, F.W.U.A. Conference, Municipal Administration Course, 4-H Club Tours, Radio Farm Forum, Rural Assessor's Course, Farm Management Associations, Seed Cleaner Plant Operators' Conference, Potter's Guild Short Course, Farm Income Tax School, District Agriculturists' Zonal Conference, Welding Courses, Fire Officers' Training Course, A.W.I. Short Courses, Summer School for High School Students, Vermilion Boys and Girls Fair Camp, 4-H Leaders' Conference, Western Hog Growers' Association. F.U.A. Convention, Drama Seminar and others.

APPRECIATION

Over the years, and again in 1962, the Schools of Agriculture have enjoyed very generous support from a large number of commercial companies, farm and other organizations and from individuals. To all of these people the Department expresses its sincere appreciation.

University of Alberta and Federal Officials have been most helpful. Their assistance is gratefully acknowledged.

The efforts of individual and joint alumni associations of the schools is very much appreciated.

Again in 1962 the co-operation and very earnest efforts of the principal and staff at each school has been outstanding.

Year	OLDS		VERMILION		FAIRVIEW		CLARESHOLM		RAYMOND		GLEICHEN		YOUNGSTOWN		TOTAL	
	Attendance	Graduation	Attendance	Graduation	Attendance	Graduation	Attendance	Graduation	Attendance	Graduation	Attendance	Graduation	Attendance	Graduation	Attendance	Graduation
1937	192	80	164	59	—	—	—	—	—	—	—	—	—	—	356	139
1938	216	69	149	62	—	—	—	—	—	—	—	—	—	—	365	131
1939	171	121	135	57	—	—	—	—	—	—	—	—	—	—	306	183
1940	168	73	110	53	—	—	—	—	—	—	—	—	—	—	278	155
1941	178	75	—	54	—	—	—	—	—	—	—	—	—	—	178	129
1942	164	77	—	—	—	—	—	—	—	—	—	—	—	—	164	77
1943	200	72	—	—	—	—	—	—	—	—	—	—	—	—	200	72
1944	182	74	—	—	—	—	—	—	—	—	—	—	—	—	182	74
1945	204	84	120	—	—	—	—	—	—	—	—	—	—	—	324	84
1946	193	92	214	—	—	—	—	—	—	—	—	—	—	—	407	92
1947	181	124	175	112	—	—	—	—	—	—	—	—	—	—	356	236
1948	198	102	193	86	—	—	—	—	—	—	—	—	—	—	391	188
1949	190	103	189	88	—	—	—	—	—	—	—	—	—	—	379	191
1950	182	100	185	92	—	—	—	—	—	—	—	—	—	—	367	192
1951	170	100	164	90	51	—	—	—	—	—	—	—	—	—	385	190
1952	163	81	162	76	88	—	—	—	—	—	—	—	—	—	413	157
1953	153	80	159	82	30	30	—	—	—	—	—	—	—	—	394	192
1954	157	75	158	82	55	45	—	—	—	—	—	—	—	—	370	202
1955	161	90	123	81	52	27	—	—	—	—	—	—	—	—	336	198
1956	142	89	95	62	54	24	—	—	—	—	—	—	—	—	291	175
1957	100	87	76	58	61	33	—	—	—	—	—	—	—	—	237	178
1958	136	63	136	42	**	82	—	—	—	—	—	—	—	—	272	137
1959	150	63	163	58	—	—	—	—	—	—	—	—	—	—	313	121
1960	146	72	137	65	32	—	—	—	—	—	—	—	—	—	315	137
1961	133	71	130	81	49	***	—	—	—	—	—	—	—	—	312	152
1962	142	73	162	68	62	19	—	—	—	—	—	—	—	—	366	160
	8,243	2,323	5,260	2,060	555	210	1,403	349	639	166	80	10	81	11	16,292	6,129

* Special Courses

** Closed — Fire, March 1953

*** Change in Program — no graduates

OLDS SCHOOL OF AGRICULTURE AND HOME ECONOMICS

GENERAL

The year 1962, may be recorded as one of the most eventful in the history of the school. It was a year of progress and change.

Enrolment was near capacity in Agriculture but after a very low enrolment in the spring term, the general Home Economics course was discontinued after 49 years of operation.

The fall session opened about one month early on September 24th. Students enrolling in Agriculture were the first under a new program. The school year was divided into two 12-week sessions with final examinations being written at the end of each session. Students with good Grade XI standing, or more, are able to obtain a diploma in three sessions while those with less education require at least four sessions to complete the program. The new program was designed to allow for specialization in Animal Science, Plant Science, Farm Mechanics, Farm Management, or for a general program. A start was also made in training students for occupations related to agriculture.

To replace the general Home Economics course, Commercial training and a course in Clothing and Design were introduced and drew thirteen and fourteen students respectively. The Commercial course is 9 months in length while the course in Clothing and Design consists of three 12-week sessions. Both these courses will continue to June 21st, 1963, while courses in Agriculture will terminate on April 5th, 1963.

Plans were made for all courses to operate for between nine and ten months in 1963-64 when Agriculture will be extended to three 3-month sessions.

Besides the course changes facilities were improved by the opening of the new Plant Science building and by improvements in other buildings. Furthermore the school went on a 5-day week by discontinuing Saturday morning classes; the school day was extended to 5:00 p.m. and class periods lengthened from 38 to 48 minutes.

The teaching of Home Economics and Industrial Arts to Junior High School students for the County of Mountain View was discontinued at the end of June.

SPECIAL LECTURERS AND VISITORS

Mr. J. Edmunds, Supervisor of Apiculture and Dr. J. G. O'Donoghue, Extension Veterinarian, each gave courses of several days duration during January. Mr. Edmunds dealt with Bee-keeping and Dr. O'Donoghue with Animal Sanitation.

Special speakers who visited the school to give one lecture each included Mr. James Rhyason of the Alberta Wheat Pool; Mr. Laidlaw of the Alberta Department of Municipal Affairs; Mr. W. K. Snyder, Field Supervisor, County of Mountain View; Mr. T. W. Hall, Veterans' Land Act, Canada Department of Agriculture; Dr. C. F. Bentley, Dean, Faculty of Agriculture, Univer-

sity of Alberta; Mr. S. S. Graham, Director, Extension Service, Alberta Department of Agriculture; Messrs. Lalor and Patterson, Alberta Department of Lands and Forests; Mr. D. H. McCallum, Alberta Dairy Commissioner; Mr. W. Phillip Keller, Naturalist, Three Hills; Mr. Arthur R. Lendi, World Traveller; Messrs. J. Stothart, Superintendent, A. D. McFadden, Plant Breeding, and H. Friesan, Field Husbandry, Experimental Farm, Lacombe; Mr. W. Perkins, Farm Safety Supervisor, Alberta Safety Council; Mr. C. L. Usher, 4-H Supervisor, Alberta Department of Agriculture; Mr. Ambrose, Canada Department of National Revenue, and Messrs. V. Macdonald and E. Featherstonhaugh, Marketing Division, Canada Department of Agriculture.

4-H EVENTS

In addition to club weeks and Provincial Eliminations which are referred to in another section of the report, the school continued to have many connections with the 4-H program; over 50% of the students were or had been 4-H members and a number were junior leaders; local and regional 4-H public speaking competitions were held at the school with a total attendance in excess of 100; during the spring term 9 clubs with a total of about 180 young people visited the school while classes were in session, had lunch in the dining room and toured the classrooms. Two students from the school, Keyoshi Aimoto, Countess and John Campbell, Mcssleigh, served as junior judges at the provincial Junior Seed Fair in Calgary where a high percentage of the exhibits are from 4-H members; several district 4-H functions were held at the school including a dairy field day and a dairy awards night.

Deserving of special mention is the fact that two members of the delegation from Alberta to National Club Week were students at the school. They were Irene Bullick of Coronation and Alfred Woelk of Endiang.

Another interesting development was the formation of a 4-H Club at the School in October. The purpose of the club is to give members attending the School and others interested an advanced look at the 4-H program.

GRADUATION

At the closing exercises on April 5th, 1962, Dr. Malcolm Taylor, Principal, University of Alberta, Calgary, delivered the address to the graduating class. Mr. R. M. Putnam, Deputy Minister of Agriculture, represented the Department of Agriculture. Donald Chiliak of Sibbald, a second year student, was valedictorian. Prizes for proficiency in various fields were awarded to fourteen graduating students. Diplomas of graduation were awarded as follows:-

	Second Year	Two-in-One	Total
Agriculture	25	37	62
Home Economics	4	7	11
	29	44	73

HOME ECONOMICS AND INDUSTRIAL ARTS COURSES FOR JUNIOR HIGH SCHOOL STUDENTS

An agreement entered into with the County of Mountain View in September 1961 was carried to completion in April, May and June 1962. Under this agreement the school provided instructors and facilities to teach grades 7 and 8 pupils, from the Olds Junior High School, Home Economics and Woodwork. Instruction was given by Miss G. Daley and Mr. G. B. Harrison to seventy-five girls and seventy-eight boys.

EXTENSION ACTIVITIES

Early in the year two adult courses for women were held. An eight week course in Tailoring was attended by eighteen women while eight attended a four week course in "Special Dishes".

During November and December, a basic sewing course was taken by 15 women.

The first two courses were held two afternoons per week and with instruction by Miss G. Daley and Miss E. S. Sokoluk of the school staff. The last course was held two evenings per week and Mrs. E. Collin of Olds was specially hired to instruct the group.

A farm machinery servicing school was conducted for two full days during November by Messrs. Burton and McFadyen of the school staff. Farmers came from the Lacombe and Rocky Mountain House areas. Though the attendance was only 6 each day, it is expected that the program will be developed further in 1963.

The facilities of the school were used by local extension workers for Farm Management schools and clinics in special subjects such as soils and livestock diseases. Attendance was good. The county advisory council organized by the extension workers also used school facilities for its meetings.

Early in March a group of District Agriculturists and District Home Economists together with Mr. L. Rasmusson, District Agriculturist Supervisor, visited the school. The day was spent in discussing the school program, seeing the facilities and observing classes.

PUBLICITY

In addition to distribution of calendars and information sheets as well as a weekly press release, some special projects were undertaken in 1962. A large display was prepared on which details of the new program were set out. This was set up at the Red Deer and Olds Fairs and used at a number of Home and School meetings. When not in use away from the school, it was mounted in the main rotunda where it was viewed by hundreds of people during the summer months.

Additional publicity was obtained through interviews which were used on the radio program "Call of the Land" and also

through several T.V. programs originating at the Red Deer Station. Both staff and students took part in the latter.

SPECIAL EVENTS

The official opening of the Plant Science building and the Livestock Pavilion was held in conjunction with the Little Royal and Achievement Day on Saturday, March 31st, 1962. The new buildings were opened by Premier E. C. Manning.

A preview of the Dress Review was held on the previous evening and it was staged morning and afternoon as well. About 1,200 people in all viewed this event. Total attendance for all events of the day exceeded 4,000.

Judge of the Little Royal was Mr. S. Lore of the Livestock Branch, a 1948 graduate of the school. George Rock of Drumheller won the Master Showman award.

A summer Alumni Reunion was held on July 6th. About 300 people attended this function which consisted of an afternoon program, buffet supper, annual meeting, evening program and dance. The classes observing their 40th, 25th, 10th and 5th anniversaries of graduation were specially honored.

The fall Alumni Dance was held on November 23rd with about 300 people in attendance.

OTHER EVENTS

The following is a list of other major events held at the school during the year:-

Month	Event	Attendance
April	4-H Leaders' Conference	40
April	Western Hog Growers Association	45
April	Alberta Teen Town Conference	90
June	A.W.I. Constituency Conference	80
June	F.U.A. District Convention	125
July	W.I. Girls Club Week	160
July	First 4-H Club Week	160
July	Farm Womens' Week	80
July and August	Second 4-H Club Week	150
August	4-H Provincial Eliminations	180
August	Drama Seminar	50

In addition to the events listed there were a number of afternoon and evening gatherings of 4-H Clubs, farmers' meetings and other group meetings. These together with the listed events and the Little Royal and Achievement Day account for about 6,000 people using the school facilities. This is in addition to regular scheduled courses for youth and adults and the many visits from individuals and small groups.

INSTRUCTIONAL STAFF

Most of the staff were fully occupied at the school throughout the summer in various activities including the revision of the school program.

Mrs. F. A. Hodgson, Dietitian, who had been able to return to work the previous September after resigning for health reasons, retired in May; Miss E. S. Sokoluk, Foods Instructress, resigned

to spend some time in Europe; Mrs. E. Clarke, Home Management Instructress, terminated her employment with the withdrawal of the general Home Economics course; Mrs. M. Beckett, School Nurse, resigned to accept hospital employment; Mr. W. C. Kirk, Farm Mechanics Instructor, resigned to return to University and subsequently join the staff of a Vocational School; Mr. J. C. Potts, Recreation Supervisor, resigned to accept other employment; Mr. J. L. Stone, shop assistant, resigned to accept other employment; Mr. J. I. D. Mathieson transferred to maintenance staff as the re-organization of the program for girls eliminated his position as Typing Instructor, and Mr. W. S. Baranyk was transferred to the Vermilion School of Agriculture to assume the duties of Principal.

Mr. Kirk carried on extension work in the Farm Mechanics field until he left at the end of August. He was assisted by Mr. R. McFadyen who joined the staff in May. W. J. Col'in did 4-H field work throughout the spring and summer while Messrs. Wilton and Ogston did some judging at 4-H livestock events.

GROUND AND PLOTS

The grounds underwent considerable change with most of the campus roads being brought up to standard for black topping. Good progress was also made in the installation of curbing and the laying of new sidewalks, seeding of new lawns and other landscaping made necessary by the construction of new buildings and the changes in roads was also carried out.

In the plot area co-operative tests of forage and cereal varieties as well as cultural tests were carried for the Lacombe Experimental Farm. A potato disease test was carried for the Department of Plant Science, University of Alberta. The plot area was also used for the production of vegetables for dormitory use and of classroom material of grasses, legumes, cereals and vegetables.

One large rotavator was purchased to expedite cultivation operations in gardens and flower beds.

MAINTENANCE PROGRAM

A normal program of repairs and re-decorating in buildings was carried out. Other major jobs done included remodelling the interior of the old bull barn and attached laboratory and dairy for use as a maintenance shop; remodelling the pump house by removing the cottage roof, installing a flat roof and facing the exterior with concrete blocks; painting the exterior of the Mechanics building and Dairy building; installation of 75 combination windows in the dormitory building and the erection of a corridor through the library making it possible to use part or all of the third floor of the girls' dormitory for boys.

CONSTRUCTION PROGRAM

Completion of the Plant Science building and of the milking parlor and loafing barn portion of the Dairy Building was carried out.

Nine fluorescent street lights on steel poles were installed along the south and west side of the dormitory. Cable was laid for these and the extension of street lighting to most of the campus. A new fire alarm system was installed.

At the end of the year new steam lines had been laid and work was well on the way toward installation of one new boiler and automatic equipment in the heating plant.

The feed plant constructed last year was completed.

A one-car garage was erected east of the Principal's residence and two pole-frame livestock sheds were constructed on the farm.

THE SCHOOL FARM

Spring seeding started under dry conditions with very little precipitation until late in June, when heavy rains fell. The first cutting of hay was below average, but good moisture conditions during July and August produced a better than average cereal crop and second cut hay crop.

Harvesting was done under almost ideal conditions except for a two week period in the early part of September.

Summary of crops grown:

	Acreage	Yield
Wheat	16	1,080 bus.
Oats	136	9,955 bus.
Hay	90	76 tons
Silage	50	110 tons
Greenfeed	65	65 tons
Pasture	150	—
Straw	152	80 tons

LIVESTOCK

The livestock were able to graze late into the fall in stubble and aftermath hay, which took them into the winter in good condition.

Two Yorkshire boars were purchased for the swine herd.

The following is an inventory of livestock as of December 31st, 1962:

Shorthorns	77	Yorkshire Swine	138
Holstein-Friesian	30	Light Sussex Poultry	342
Suffolk Sheep	105		

FARM SALES

Farm sales for 1962 were as follows:

Dairy Products	\$ 5,125.95	Livestock	16,453.27
Poultry and Eggs	1,237.27		
Vegetables	967.43	Total	\$23,783.92

EQUIPMENT REPLACEMENTS

A new combine and a seed drill were purchased as replacements; a new straw buncher was an addition to the farm equipment.

The annual quota of construction of field fences and corrals was completed.

DAM CONSTRUCTION

A large slough at the west end of the south farm has been a problem in wet years because of underground seepage resulting in damage to crop land to the east of it. During the year a dam was constructed along the south fence line across the slough. This will make it possible, after some ditching has been done, and a weir installed, to control the water level.

THE 1962 FALL SESSION

The fall session was the first period in which the revised program was in effect.

Registration was as follows:

Second Year Agriculture	28
First Session Agriculture	114
Clothing and Design	14
Commercial	13
	169

Only two students withdrew during the session and none were suspended.

Student spirit and morale was very high; performance in class was generally satisfactory and extra-curricular activities were entered into with enthusiasm.

A complete and competent staff was on the job throughout the session. Instructional and administrative staff were as follows:

J. E. Birdsall, M.Sc., P.Ag.—Principal, Community Organization
 H. J. Armstrong—Metals
 W. S. Baranyk, B.Sc., B.Ed., P.Ag.—Plant Science
 Miss T. Graham—Dietitian, Dean of Women
 Miss E. Fringer, R.N.—School Nurse, Home Nursing, Ass't. Dean of Women
 R. P. Warrington—Dean of Men, English
 D. M. Hueppelsheuser—Assistant Dean of Men, Supervisor of Recreation
 Miss G. Daley, B.Ed.—Clothing and Design
 Mrs. B. Gough—Commercial
 W. M. Burton, B.S.A.—Machinery and Motors
 G. B. Harrison, B.Sc., P.Ag.—Farm Structures
 R. G. McFadyen, B.E.—Machinery and Motors
 S. B. Wilton, B.Sc., P.Ag.—Animal Science, English (Commercial)
 H. W. Sutherland, B.Sc.—Farm Management, Science
 G. A. Ogston—Farm Manager, Animal Science
 W. J. Collin, B.Sc.—Plant Science
 L. L. Lang, B.Sc.—Plant Science
 O. E. Oxtoby, B.Sc., P.Ag.—Animal Science, Mathematics
 L. A. Allen—Maintenance Supervisor
 Mrs. B. Brown—Librarian
 J. M. Shaver—Accountant
 Miss D. M. Hoel—Secretary
 Mrs. H. W. Sutherland—Stenographer

VERMILION SCHOOL OF AGRICULTURE & HOME ECONOMICS

GENERAL

The year was gratifying in most respects. There was a marked increase in the number of students taking courses in Agriculture and with the diversification of the girls' program a marked increase in the attendance was noted.

The normal program of classes and extra-curricular activities was carried through the spring term to a satisfactory conclusion. The summer program was extensive and varied, serving the community and province primarily in the sphere of agriculture.

Mr. G. A. Boggs, Instructor in Farm Buildings, was granted ten weeks' leave of absence during the summer to take a course in Industrial Training at the University of Washington while Mr. R. M. Gratz, Instructor in Animal Science, is presently on leave of absence, pursuing studies at the University of Alberta under the terms of Leave for Professional Improvement regulations.

SPECIAL LECTURERS AND GUEST SPEAKERS

A number of guest speakers and subject matter specialists addressed members of the Graduating Classes during February and March.

J. G. O'Donoghue, D.V.M., Extension Veterinarian gave a series of lectures and demonstrations in Animal Sanitation. Special speakers who addressed various classes were: Dr. C. F. Bentley, Dean, Faculty of Agriculture, University of Alberta; Mr. Ross Cairns, Officer-in-Charge, Soil Research Sub-Station, Vegreville; Mr. W. D. Sharpe, Income Tax Assessor, Edmonton; Mr. G. W. Ambrose, Director, F.U.A., Accounting Service, Edmonton; Mr. C. H. Ferries, Agricultural Economist, Alberta Department of Agriculture; and Mr. J. M. Bentley, President, Alberta Federation of Agriculture, Edmonton.

GRADUATION—April 4th, 1962

The Commencement Exercises were preceded by the fashion parade in which the students in the Home Economics classes modeled a variety of wear they tailored in class.

Four hundred parents and guests were present for the afternoon.

The Commencement Address was delivered by the Reverend A. Hart Cantelon, Principal of Alberta College in Edmonton. Mr. J. E. Hawker, Superintendent, represented the Alberta Department of Agriculture.

Diplomas of Graduation were presented as follows:

	Agriculture	Home Economics	Total
Second Year Course	32	4	36
Two-in-One Course	27	5	32
	<u>59</u>	<u>9</u>	<u>68</u>

Winners of Major Scholarships and Awards.

Vermilion Rotary Club—General Proficiency—Sharon Wright, Cherhill.
Winnipeg Grain Exchange—General Proficiency—Allan Shermack, Camrose.

Vermilion Chamber of Commerce—Greatest Contribution—Grant MacGregor, Holden.

Line Elevators Farm Service—Plant Science—Herman Bulten, Leduc.

Craig's Limited, Vermilion—Animal Science—Danny Hall, Sangudo.

Imperial Oil Company—Farm Mechanics—Dale Knox, Macklin, Sask.

Smith Roles Limited, Saskatoon—Farm Machinery—Douglas Pawsey—Edgerton.

British American Oil Company—Farm Management—Lloyd Smith, Provost.

Alberta Turkey Association—Dairying and Poultry—Grant Good, Ellscoff.

Staff Medals were awarded to: Edgar Mortensen, Leduc; John Eaton, McBride, B.C.; Gilbert Francis, Alyesbury, Saskatchewan; Marilyn Paradis, Ribstone.

SPECIAL EVENTS

"Little Royal" and Achievement Day

Over 1,200 persons attended this event on March 24th, 1962. Mr. W. H. T. Mead, Provincial Livestock Commissioner of Edmonton and Mr. D. R. Macpherson, District Agriculturist at Hannah, were guest judges for the "Little Royal". Grand Champion Showman selected was Blaine Franks of Heinsburg.

Guest judges for the Achievement Displays were: Mrs. Elizabeth A. Durie, D.H.E., Two Hills and Miss E. Zawadiuk, D.H.E., St. Paul, Messrs. Claude Underdown, T. Hutton, G. Ross, R. Snelgrove, and A. B. Klatt of Vermilion.

Other Special School Events

Parents' Weekends—These have been established for some time and afford the opportunity for parents to visit while their sons or daughters are attending the School. Parents and students have expressed appreciation for such an opportunity. Two such events were held, March 17th and November 25th. Together they attracted over 500 relatives.

The V.S.A. Alumni Association holds three Re-Unions and Dances annually at the School, the Spring, Fall and Summer Re-Union. Over 1,000 graduates and friends attended.

Representative Non-School Events at the V.S.A. in 1962

These included:

- 8 - 4-H Club Meetings.
 - Farm Forum District Meeting.
 - Rural Assessors' School.
 - Vermilion Credit Union—Annual Meeting.
- 5 - Farm Management Schools.
- 2 - Seed Cleaner Plant Operators' Meetings.
- 2 - 4-H Club Leaders' Annual Conferences.
- 2 - 4-H Club Public Speaking Contests.
- 2 - Potters' Guild Short Courses.
 - Farmers' Meeting—Income Tax.
 - District Agriculturists Conference.
 - Vermilion Saddle Club—Demonstration.
 - Welding School.
 - Final Examinations—Public Administrators.
 - Zone Meeting—Alberta Civil Service Association.
- 2 - Fire Officers' Training Courses.
- 2 - W. I. Handicrafts Workshops and Convention.
 - Vermilion District Agricultural Extension Council.
 - Summer School for High School Students.

- 2 - Sewing Short Courses.
 - F.U.A. District Convention.
 - V.S.A. Alumni Summer Re-Union.
 - F.U.A. and C.D.A.—Young People's Camp.
 - 4-H Club Week.
 - Boys' and Girls' Fair Camp.
 - C.G.I.T. Conference.
 - Public School Teachers' Convention.
- 2 - Municipal Officers' Short Courses.

V.S.A. ON RADIO, T.V. AND IN THE PRESS

The year 1962 saw the completion of five consecutive years of broadcasting originating from the Vermilion School of Agriculture.

On January 1, 1962, this School undertook to provide Radio Station Lloydminster with 5 minute radio shows to be aired daily Monday through Friday each week. During the absence of Mr. K. Stone, for part of the summer, this work was continued by Mr. J. F. Harcus.

These programs depict life at the School during the school term, as well as bringing to listeners the voices of various guests at the School with timely agricultural information.

Radio time has been provided by local broadcasting authorities on a public service basis throughout the entire year.

October of 1962 also saw the completion of 12 months of regularly scheduled television shows. These shows have been of 25 minute duration and have been prepared and presented by members of our teaching staff. The response by both viewers and television staff has been most gratifying.

The local press has also made space available for weekly reports of events occurring at the School under the heading "Halls of V.S.A." These are written by students attending the School and edited by the Instructor in English.

EMPLOYMENT OF STAFF THROUGH SUMMER MONTHS

- Miss F. J. Haworth—District Nurse, Alberta Department of Health.
- Mr. B. J. Godwin—Meteorological Services, Farm Weather Broadcast, Edmonton.
- Mr. L. G. Seath—Community Pastures Supervisor, Land Utilization Branch.
- Mr. J. A. R. Palin—Extension Engineer, Extension Services.
- Mrs. L. C. Johnson—Women's Extension Service.
- Mr. K. M. Stone—Regional Weed Supervisor, Field Crops Branch.
- Mr. M. G. Boulet—Transferred to District Agriculturist Service.
- Mr. R. M. Gratz—Regional 4-H Supervisor.

MAINTENANCE, SCHOOL GROUNDS AND PLOTS

Repairing jobs and redecorating in the dormitory and major buildings throughout the campus employed the major attention of the Maintenance Staff through the summer.

School grounds, gardens, nursery and field crop plots attracted a large number of visitors and provided useful material for classroom work.

THE SCHOOL FARM

The weather for crop production in the Vermilion area was relatively good. Hail on August 8, 1962, caused considerable damage to the oat crop. Hay and silage crops were good but rains during the summer prevented good quality. Conditions were favourable for garden produce but due to irregular germination yield of beets was considerably lower than expected.

CROPPING PROGRAM — 1962

Crop	Acres	Yield
Wheat	0	300 bus.
Oats	78	3,522 bus.
Barley	29	2,100 bus.
Hay	110	149 tons
Silage	40	156 tons
Breaking	40	—
Fallow	32	—
Pasture	78	—
Vegetables	4	20 tons
Total	420	

FARM SALES JANUARY 1st, 1962, TO DECEMBER 31st, 1962

Vegetables	\$ 300.00
Dairy Products	6,820.00
Poultry Products	2,120.00
Livestock	10,900.00
Wool, Hides and Miscellaneous	380.00
	<u>\$20,520.00</u>

THE 1962-63 TERM — ENROLMENT AS OF OCTOBER 22, 1962

1st Year Agriculture	67	
2nd Year Agriculture	32	
Two-in-One Agriculture	35	134
Home Economics	8	
Commercial	13	
Commercial and Home Economics	7	28
Total		<u>162</u>

The fall term commenced with all classrooms taxed beyond desirable teaching limits. The regular teaching program was confined to conform with the five day week. However, due to the fact that most students cannot readily go home for weekends, a system of clubs was organized for Saturday mornings and all students were required to participate. The clubs were designed to acquaint those interested or provide them with an opportunity to improve their skills in extra-curricula activities. Square Dancing, Public Speaking, Outdoor Activities, Hockey, Curling, Bowling, Livestock and Mechanics Clubs were most popular. These were supervised by regular staff members and professionals outside of the School were called in to assist. Student response was most gratifying. In addition, the normal extra-curricular work was carried out to satisfy the needs of Student Government.

The School continues to receive very fine support from farm organizations, commercial firms and the Town of Vermilion in terms of scholarships, prizes, loan of equipment and materials for demonstration purposes in the classrooms.

Cash prizes and bursaries have assisted a number of students who otherwise would have been unable to attend. This type of assistance provides opportunities for several young men and women to extend their training at this School.

TEACHING AND ADMINISTRATIVE STAFF—1962-63

- W. S. Baranyk, B.Sc., B.Ed., P.Ag.—Principal, Community Organization and Employment Training.
- G. A. Boggs—Farm Structures and Drafting.
- B. J. Godwin, B.Sc.—Botany and First Year Field Husbandry Labs.
- J. F. Marcus, B.Sc., B.Ed., P.Ag.—Farm Manager, Animal Husbandry.
- Miss Jessie F. Haworth, R.N.—Dean of Women, School Nurse, Home Nursing.
- H. R. Holtby, B.Sc.—Animal Science, Poultry and Dairying.
- Mrs. Hazel Hurt—Commercial.
- Mrs. L. C. Johnson—Clothing.
- W. Leitenberger—Horticulture, Physical Training.
- J. A. R. Palin, B.S.A.—Motors
- J. Pankratz, M.Sc.—Dean of Men, Science, Mathematics.
- F. V. Pedersen—Metalwork
- L. G. G. Seath, B.Sc.—Farm Management.
- K. M. Stone, B.Sc.—Field Husbandry.
- Kenneth W. Taylor, B.A.—English, Math.
- Mrs. M. Jean Wright, B.Sc.—Home Management, Cooking.
- R. M. Warner, B.S.A.—Farm Machinery.

FAIRVIEW COMMUNITY COLLEGE**GENERAL**

In the 1961-62 term the Agricultural course was organized in six week blocks on a ten month period making it possible for a student to complete the Agricultural course in one year. An effort was made to get a class started in September of 1961. Because of a very early fall and exceptional harvest weather, nine boys decided to start in September. On October 23, 1961, nineteen additional boys and four girls registered for vocational subjects. The girls registered in the new special course for girls called Dressmaking.

On December 11, 1961, an additional fourteen boys registered for second year Agriculture and six boys for two-in-one Agriculture. All of this was organized on the assumption that a mechanics building would be completed December 1st, 1961.

Because the shops were not ready, it was impossible to offer mechanics courses and the second year students and nine students who started in September, 1961, were given a six week block of second year subjects not involving mechanics. This resulted in a very confused year for students and staff alike.

During the 1961-62 term because, largely, of lack of gymnasium facilities, there were numerous minor disciplinary problems. In addition one student was suspended for three weeks and one expelled for infraction of the liquor regulations. Two others received severe reprimands.

A number of staff changes occurred during 1962. Miss M. L. Scott, Secretary, and Miss S. M. McLachlan, Instructress in Foods, resigned to tour Europe and were replaced by Miss D. E. Klein and Mrs. P. J. Sheehan respectively. Miss M. F. Daly, School Nurse, resigned because of ill health and was replaced by Miss B. Guedesse. Miss N. I. Semotiuk, Instructress in Clothing, left for personal reasons and was replaced by Miss F. Meakin.

Mr. R. S. Forrest replaced Mr. E. F. W. Mueller as Instructor in Agricultural Mechanics. Mr. A. Malbeuf resigned to go into business and Mr. J. H. Nichols was appointed Maintenance and Construction Supervisor.

Miss T. Graham, Dietitian, was transferred to the Olds School and her duties assumed by Mrs. P. J. Sheehan. Mr. A. D. Parkkari, Accountant, transferred to the Southern Alberta Institute of Technology and was replaced by Mr. J. Wilson. Mr. W. J. Perkins was appointed Dean of Men and Instructor in Mathematics and English. Miss E. M. L. Fredeen was appointed Commercial Instructor.

SPECIAL LECTURERS AND VISITORS

The following were guest lecturers at the College:

- Mr. McCallum, Dairy Commissioner, Edmonton.
- Mr. Moore, Alberta Wheat Pool.
- Mr. W. Wood, Manager, Royal Bank of Canada, Fairview.
- Mr. Len Bauer, Agricultural Economist, Edmonton.
- Mr. K. G. Taylor, Administrator and Secretary, Farm Purchase Credit Advisory Committee, Edmonton.
- Mr. J. Dobbs, Forage Researcher, Dominion Experimental Station, Beaverlodge.
- Mr. Don Sayer, District Director, Lands and Forests, Peace River.
- Mr. Peter Pankiw, Apiculturist, Dominion Experimental Station, Beaverlodge.

GRADUATION

Graduation for all vocational students was held June 29th, 1962. Mr. Peter Jamieson, District Agriculturist and former principal of Fairview School of Agriculture, delivered the Commencement Address. Mr. J. E. Hawker, Superintendent, also a former Principal of Fairview School of Agriculture, was departmental representative. Other guests present to take part in the ceremony were Mrs. McBryan of Grande Prairie, Mr. Vic Nasedkin of Fairview, and Rev. Schmidt of Fairview. Ken Sorenson, Dixonville, delivered the Valedictory Address. Rev. Schmidt gave the Invocation.

The ceremony was held outside on the campus lawn. The graduation ceremonies were followed by a banquet in the College dining room and a dance in the Fairview High School gymnasium. The parents of the graduates were guests of the College at these functions.

This year, for the first time, the alumni celebrated their annual reunion in conjunction with graduation exercises. Some fifty former students had a lawn party while the banquet was in progress. They then joined with the graduates to enjoy the dance in the evening.

Diplomas of graduation were awarded as follows:

	Second Year	Two-in-One	Total
Agriculture	12	3	15
Dressmaking	—	4	4
	12	7	19

Scholarship Winners were:

Val. Newton Memorial Scholarship presented by Mrs. McBryan of Grande Prairie—Dewey Stickney, Beaverlodge, Alberta.

Imperial Oil Scholarship presented by Mr. Vic Nasedkin, Fairview—Nick Hudak, Worsley, Alberta.

Line Elevators Scholarship presented by Mr. Jamieson on behalf of Line Elevator Farm Service—Allen Watson, Dawson Creek, B.C.

U.F.A. Co-op Scholarship presented by Mr. Hawker on behalf of U.F.A. Co-op—David Gray, Hines Creek, Alberta.

Wheat Board Surplus Monies Trust Scholarship presented by Mr. J. E. Hawker, Superintendent to Larry Sorken, Sexsmith, Alberta.

SPECIAL EVENTS IN THE 1961-62 TERM

During 1961-62 term a very successful Parents' Day was held with about 95 parents in attendance. Our students participated in a basketball tournament on April 14, 1962. The College again catered to the Fairview High School graduation banquet on May 25, 1962. About 170 guests were served.

SCHEDULE OF OTHER FUNCTIONS

	Attendance
Alberta Dairymen's Association, Peace River District Plant Section Conference	25
Grades II and III from the Fairview Elementary School toured the College	56
F.U. and C.D.A. Teen Camp	84
4-H Club Week	86
F.W.U.A. Conference	25
Municipal Administration Course	25
Master Farm Family Banquet	125

STAFF OFF-SEASON ACTIVITIES

Freeman, C. N.—Supervised the care and maintenance of grounds and judged at District Fairs.

Jones, L. T.—Supervised the operation of the school farm and judged at District Fairs.

Keller, A. E.—Extension Branch

Lancaster, J. T.—Acting Principal and judged at District Fairs.

Miller, E. A.—General Welding and setting up Welding Laboratory.

Osbaldeston, V. W.—Continued the duties of Principal.

Peterson, H.—Electrical maintenance and set up the Mechanics laboratory.

Meakin, Miss F.—Acted as Dean of Women from September 1st to October 1st.

Sheehan, Mrs. P.—Did promotional work for the College and prepared courses.

Warne, J. H.—Judged at fairs and did promotion work for the College.

GROUND AND PLOTS

The grounds were adequately maintained throughout the year. A hedge was added to the plantings along the east side of the road running behind the Principal's house. The playing field was extended to the south. Ground was prepared for the plantings of shrubs and trees along the west border of the area. The grade around the mechanics building was completed in preparation for landscaping in 1963.

MAINTENANCE PROGRAM

In 1962 a considerable amount of general maintenance was performed which included installation of several concrete culverts with removable wooden tops, repairs to doors throughout the buildings, replacement of steam radiator traps and valves and numerous electrical fixtures, switches and other electrical equipment replaced or repaired. Some electrical alterations were made to conform to the requirements of the electrical code.

More specifically the maintenance crew built benches and cupboards for the mechanics building and other classrooms and offices, removed the asbestos shingles and stuccoed the Farm Manager's house, repaired the poultry house floor, poured concrete pads east of the beef and hog barns, removed the broken pads and side walk sections east of the boys dormitory and replaced them, completed a room in the basement of a staff house, painted much of the exterior trim of the dormitory, the front entrance, a number of inside rooms and classrooms, and the exterior trim of the garage.

The work of replacing corroded and leaking galvanized piping was continued. The roof vents were waterproofed and a return pump replaced.

A new transformer bank to supply the mechanics building was connected into the system.

A great deal of maintenance work was performed on the refrigeration equipment.

CONSTRUCTION PROGRAM

The construction of a new mechanics building was started on November 22, 1961. This building was not completed sufficiently for occupancy until February 12, 1962. There were numerous small repairs, alterations and corrections and one major correction made after that date.

Although the specifications called for a hard surfaced floor it was discovered that this had been improperly done. The contractor removed the floor and replaced it by early August.

A sheep barn was constructed on the school farm.

THE COLLEGE FARM

Average precipitation prevailed during the year. A late cold spring delayed seeding reducing the quality of grain and hay and reducing pasture yields. Rain during hay harvesting

reduced the hay quality. Early frosts and late harvest were general in the area.

Gross farm sales for 1962 were increased owing to an increased livestock inventory.

FARM CROPS 1962		
Crop	Acreage	Yield
Hay	22	16 tons
Pasture	96	—
Oats for Silage	30	58 tons
Barley for Silage	6	10 tons
Oats	30	1,344 bus.
Barley	32	1,600 bus.
Vegetables	4	14 tons
	220	

FARM LIVESTOCK 1962			Number	Total
Kind	Breed			
Cattle	Holstein		27	
	Aberdeen Angus		22	
	Shorthorn		1	
	Mixed Feeders		20	70
Sheep	Rambouillet		15	
	Romnelet		17	
	Hampshire x Rambouillet		3	
	Hampshire x Romnelet		9	
	Hampshire x Suffolk		1	
	Cheviot x Rambouillet		5	
	Cheviot x Romnelet		7	58
Swine	Yorkshire		60	60
Poultry	Leghorns (Triska 292)		192	192

The livestock on the farm was used extensively in classroom work. The College is participating in the demonstration of a sheep cross-breeding program in co-operation with the other two schools and the livestock branch. The rams were supplied on loan by the livestock branch.

FARM SALES, 1962

Note: Sales for December are estimated

Livestock	\$ 8,402.00
Dairy Products	3,488.00
Poultry Products	1,270.00
Wool	190.00
Vegetables	452.00
Total Sales	\$13,802.00

The farm purchased a new manure spreader, post driver, tandem disc and farm truck in 1962. During the year the corrals were rebuilt and a new livestock scale installed.

THE 1961-62 TERM:

ENROLLMENT						
	Sept. 5 1961	Oct. 23 1961	Dec. 11 1961	Feb. 5 1962	Mar. 26 1962	May 14 1962
First Year Agriculture	9	27	19	17	Nil	Nil
Second Year Agriculture	Nil	Nil	23	22	14	3
Two-in-One Agriculture	Nil	Nil	6	6	3	Nil
Dressmaking	Nil	4	5	4	4	4
Academics—Boys	12	12	17	17	12	12
—Girls	17	17	20	20	10	10
Totals	58	60	90	86	43	29

APPRECIATION:

The assistance to various students by those listed below was much appreciated:

Alberta Wheat Pool—Mr. W. P. Loggie.

United Grain Growers—Mr. and Mrs. McBryan.

Royal Canadian Legion—Line Elevator Farm Service.

Winnipeg Grain Exchange—Queen Elizabeth Scholarship Fund.

The Surplus Wheat Board Monies Trust Fund.

The Fairview School Division again made academic education available to a limited number of students resident in the College. Appreciation is expressed to the Fairview School Board, the Fairview School Superintendent, and the Fairview High School Principal, Mr. B. J. M. Roe and his staff for their co-operation.

The Fairview High School gymnasium was rented for two or three nights per week to enable the College to carry on its sports program.

Appreciation is expressed to the staff for their excellent co-operation throughout the year notwithstanding some trying times due to lack of facilities.

INSTRUCTIONAL AND ADMINISTRATIVE STAFF:

V. W. Osbaldeston, B.E., B.Ed.—Principal, and Business Training.

J. T. Lancaster, B.Sc., P.Ag.—Field Crops, and Farm Management (part)

L. T. Jones, B.S.A., P.Ag.—Farm Manager and Animal Husbandry.

W. J. Perkins, B.Sc.—Dean of Men, English and Mathematics.

D. A. Fleming—Supervisor of Recreation and Assistant Dean of Men.

Miss B. Guedesse, R.N.—Dean of Women and School Nurse.

Miss E. M. L. Fredeen, B.A.—Commercial Instructress.

Miss F. Meakin, B.Sc. (H.Ec.)—Clothing Instructress and Assistant Dean of Women.

Mrs. P. J. Sheehan, B.Sc. (H.Ec.)—Foods Instructress and Dietitian.

J. H. Warne, B.Sc., P.Ag.—Farm Management (part), Animal Husbandry and Automotive Mathematics.

C. N. Freeman, B.S.A.—Science, Botany and Horticulture.

A. E. Keller, B.E.—Farm Structures, Drafting.

R. S. Forrest, B.E.—Farm Mechanics.

A. E. Miller—Welding and Metalwork.

H. E. G. Peterson—Automotives.

J. W. Wilson—Accountant.

Miss D. E. Klein—Secretary.

Mrs. W. Bartlett—Librarian.

J. H. Nichols—Supervisor of Maintenance and Construction.

Report of the Radio and Information Branch

E. B. SWINDLEHURST, Supervisor

WARREN WISMER, Senior Commentator

JOHN ANDREW, Commentator

Miss DIANA RODNEY, Information Officer

Up-to-date information for farmers and homemakers of Alberta was provided by the Radio and Information Branch in 1962.

Through weekly releases and daily radio programs, knowledge procured from research people, department specialists and others was passed on for farm information and use.

Staff changes in the branch last spring resulted in engagement of Warren Wismer and John Andrew as "Call of the Land" commentators. Ed Hamula and Scott Flewitt resigned on March 31 to enter private practice.

RADIO PRODUCTION

During 1962 "Call of the Land", a Monday to Friday farm radio broadcast was aired 261 times on each of ten Alberta radio stations. The following was the complete roster of stations that broadcast "Call of the Land".

CKUA Edmonton	12:20 p.m.	CKSA Lloydminster	12:50 p.m.
CFRN Edmonton	12:45 p.m.	CJDV Drumheller	12:50 p.m.
CFGP Grande Prairie	12:05 p.m.	CFCN Calgary	1:00 p.m.
CFCW Camrose	12:05 p.m.	CJOC Lethbridge	1:05 p.m.
CKRD Red Deer	12:45 p.m.	CHAT Medicine Hat	1:05 p.m.

The main objective of the branch was to make radio a prime agricultural information medium. To best do this, effort was continually made to provide material of a variable and appealing nature to as many rural homes as possible. Attention was concentrated on preciseness and timeliness so that items would coincide with the needs of farmers for them. An attempt was also made to have interviews and other items coincide with activities of the extension branch in order to increase the farmers interest in the work of that branch.

"Call of the Land" was produced, recorded and distributed from the studios of the Radio and Information Branch in the Brock Building. Excellent co-operation was received from the engineering and managerial staff of CKUA and CFRN, Edmonton. The technical facilities of CKUA, Edmonton were used again this year for the direct transmission of seven broadcasts to other parts of the province. Line facilities for this were arranged through Alberta Government Telephones.

EVALUATION

Listeners comments and inquiries and Bureau of Broadcast Measurement survey results were the main guides used to assess the popularity of "Call of the Land". Letters and telephone requests for information related to subjects aired on the broadcast were received regularly. Topics covered which brought a more notable response were: a discussion on wills, father-son agreements, partnership agreements and farm incorporation; a series on horticulture and some of the weekly items especially for farm women.

"Call of the Land" also received national recognition this year when one of the commentaries was awarded honorable mention in the Canadian Farm Writers competitions.

Bureau of Broadcast Measurement surveys conducted in the spring of 1962 showed that a total of 98,000 homes listened to "Call of the Land" at least once or more per week. It does not take into consideration how many times a week these homes listened. Cost of the service is estimated at less than one-half cent per home reached per day.

PROGRAMMING

In preparing the broadcasts a great deal of effort was put into providing an interesting variety of material pertaining to all phases of farming in Alberta. Broadcasts contained an average of slightly more than four items each. The main methods of presentation were the personality interview, the on-the-spot report or interview, the miscellaneous item or announcement and the editorial or comment. The following table shows the use of each:

Items used	Number of programs
(a) Personality interview	225
(b) On-the-spot reports and interviews	46
(c) Miscellaneous items and announcements	788
(d) Editorial (by commentators or guests)	1
(e) Musical (special days — Christmas)	1
TOTAL	1068

The personality interview played an important role in enabling specialists and others to tell their story. Counting on-the-spot interviews, there were only 17 programs during the year that did not contain an interview. Several radio stations indicated that they received better response from the program as long as it did contain an interview.

Sources of personality appearances for the year were as indicated in the following table:

Alberta Department of Agriculture	119
Other Alberta Government Departments	5
Canada Department of Agriculture	47
University of Alberta	19
Farm People (including 4-H)	24
Others	30
TOTAL	244

This year the personality appearance made much greater use of our own department specialists and other personnel, and specialists of the federal department of agriculture than in other years. A total of 1,068 items were used on 261 shows.

The following table shows the nature of the material used and the number of times dealt with during the year.

1. General Agriculture (including world and national items)	182
2. Livestock	220
3. Field Crops and Soils	205
4. Farm Safety	27
5. Farm Management and Farm Economics	33
6. 4-H	36
7. Poultry	27
8. Dairying	49
9. Veterinary Science	23
10. Horticulture	29
11. Farm Mechanics	19
12. Agricultural Pest Control	32
13. Schools of Agriculture	32
14. Beekeeping	7
15. Fur Farming	4
16. Miscellaneous (consumer topics, announcements, etc.)	143
TOTAL	1068

Livestock and field crops received the most attention again this year. While the number for farm management and economics appears low, it did receive greater emphasis this year. It appears low because an item dealing with the economics of beef production was classified under livestock. The same applies to many other phases.

Excellent co-operation was received from the Economics Branch, as with other branches, in co-ordinating radio items with their work.

Several special series of programs were produced this year, all of which were well received. These included a special product outlook series at the beginning of the year, with the help of members of the various branches; a special series on livestock diseases with members of the Veterinary Services Branch; and a weekly series on hints for the farm homemaker. At the same time, the regular supply of information from the other branches was greatly appreciated since it formed the foundation of our programming.

The color and variety to round out the show was obtained from the experimental farms, field days, and farm meetings and conventions that were of general interest to Alberta farmers.

For the fifth successive year, a series of programs originating at the Royal Winter Fair was relayed to the stations by Alberta Government Telephones network each morning. In addition to this up-to-date reporting service, daily night press reports of Alberta winnings at the Royal were supplied to several daily news outlets. This was the eighth successive year in which reports were made to Alberta from the Royal. The assignment was handled by Warren Wismer who worked in close liaison with other Alberta Government officials, as well as with press, radio and television personnel.

As of December 31st, this branch had produced 2,284 continuous Monday through Friday farm broadcasts.

TELEVISION

During 1962, branch personnel co-operated with the Film and Photographic Branch of the Provincial Secretary's Department in issuing to each T.V. station in Alberta, 1,200 feet (36 minutes) of film coverage of the Royal Winter Fair. In addition, the branch participated in a special 25 minute farm program on CBXT-TV Edmonton, featuring the Royal Winter Fair.

Alberta is the only province in Canada that provided this service. It was greatly appreciated by the stations who regard it as part of their regular programming each year at that time.

SCIENCE AND THE LAND

Periodic calls to research centres in Alberta resulted in 70 Science and the Land releases in 1962.

Visits were made to the Research Station, Lethbridge, to various departments of the Faculty of Agriculture, University of Alberta, and to the Experimental Farms at Lacombe and Beaverlodge. Attended also were the annual meeting of the Canadian Phytopathological Society (Alberta Regional Group) in Calgary, and advisory board meetings of scientists and administrators in Edmonton.

Excellent co-operation was again experienced throughout and no hesitation was encountered on the part of the scientists in providing reports, theses, or verbal explanations of the work in progress. Releases were well received and good use was made of them by press, radio and key personnel in agriculture.

FARM NOTES

Farm Notes, released weekly during the past year, contained some 300 items of agricultural and homemaking interest. Prepared by the Information Officer, this release offered timely recommendations, reports and news, obtained chiefly from agronomists and home management specialists of the Department.

Farm Notes has provided an effective medium for concise and authoritative information and was well received and widely used by radio, press and extension people throughout the year. Distributed weekly were 1,800 copies of Science and the Land and Farm Notes, half of which went to elevator companies in Alberta for agent reference.

Report of the Land and Forest Conservation and Utilization Committee and ARDA

G. R. STERLING, Chairman

H. W. THIESSEN, Supervisor of Irrigated Pastures

The personnel of the Land and Forest Conservation and Utilization Committee remained the same as in the 1960 report. One meeting was held during 1962, and all the members of the committee met as an ARDA Committee to discuss problems relating to this Act.

Rannock:

Fencing on this pasture was completed by the construction of approximately 2½ miles of cross fence.

Wanham:

Fencing on this pasture was completed late in the fall.

Minburn:

One forty acre field where grass failed to catch was reseeded.

Wetaskiwin:

The perimeter fence lines around the westerly eighteen sections was cleared and the fencing almost completed around this part of the project.

Westlock:

This project was withdrawn at the request of the Municipal District.

Ponoka, Thorhild, Smoky Lake, St. Paul, Stony Plain:

Funds did not permit work on these pasture projects during 1962.

Lac Ste. Anne:

This municipality requested pastures in three locations as listed below:

1. Parts of Secs. 7, 8 and 16 lying generally north of Lake Majeau, Secs. 17-21 inclusive, Secs. 28-30 inclusive, Pt. Sec. 31 lying south of the Pembina River, and Secs. 32 and 33, all in 57-3-5.
Secs. 13, 14, 23 and 24, and Parts Secs. 25 and 26 lying south of the Pembina River, all in 57-4-5.
2. Secs. 3, 10, 11, Secs. 13-15 inclusive, Secs. 22-27 inclusive, and Secs. 34, 35 and WH 36, all in 54-6-5. Secs. 3-10 inclusive, all in 55-6-5.

3. Secs. 2-11 inclusive, Secs. 14-23 inclusive, and Secs. 29-32 inclusive, all in 59-7-5.
Secs. 1-3 inclusive, Secs. 10-15 inclusive, Secs. 22-29 inclusive, and Secs. 32-36 inclusive, all in 59-8-5.

These areas were investigated late in the fall and as yet have not been recommended by the Utilization Committee.

Grande Prairie

The County of Grande Prairie requested that two pastures be established as indicated below:

1. Kleskun Lake
Sec. 1, Secs. 8-24 inclusive, Secs. 27 and 28, SH 29 and SE 30, all in 73-4-6.
2. Goodfare
Twp. 71-13-6, and the SH Twp. 72-13-6.
Both were investigated but no recommendation made.

Ranfurly:

The Municipal District of Minburn requested a second pasture as indicated below:

Secs. 26, 34, 35, and NE 27, all in 51-12-4.
Secs. 2-4 inclusive, 9-11 inclusive, 14-16 inclusive, 21-23 inclusive, 26-28 inclusive, and 33-35 inclusive, all in 52-12-4.
This request was not investigated during the year.

Wolf Creek:

A request was received from Improvement District No. 101 to establish a pasture in the area indicated below:

Twps. 65 and 66, Rges. 6, 7 and 8, north of Garth.
Twps. 58 and 59, Rges. 4, 5 and 6, south of Muriel Lake.
This area was not investigated.

North Peace Community Pasture Association:

A request was received to establish three pastures as indicated below:

1. Twp. 84, Rges. 25 and 26, West of the 5th Mer., and Rge. 1, West of the 6th Mer.
2. Twp. 88, Rge. 24, West of the 5th Mer.
3. Twps. 84 and 85, Rge. 7, West of the 6th Mer.

Two areas, namely 1 and 2, were investigated but no recommendation made.

Seven Persons:

Approximately 205 acres of levelled land were seeded to the Lethbridge irrigated pasture mix. A very good catch was realized. In the early spring, 175 acres of dry land was seeded to Russian Wild Rye and Rambler Alfalfa. Later in the fall, 160 acres of abandoned cultivation were seeded to Crested Wheat Grass and Rambler Alfalfa.

All fencing was completed. This consisted of 5 miles of perimeter fence and 6½ miles of cross fencing. The corrals on the NW 34-11-7-4 were completed. The irrigation structures, which were not completed the previous fall, were completed.

Dugouts and dams were constructed on the following lands: NW 16, NE 17, SW 20, NE 21, SW 22 and SE 28, all in 11-7-4.

The Seven Persons Grazing Reserve was officially opened by G. R. Sterling on July 11, 1962. Cattle were entered in the reserve May 15 with 332 animal units being grazed for a 5½ month season. The grass was fertilized at a rate of 160 lbs. 45-0-0 and 80 lbs. 11-48-0 applied in May.

The established grass and the new grass was irrigated 4 to 5 times, in total 2,411 acres were irrigated utilizing 1,298 acre feet of water.

It is anticipated that approximately 1,000 animal units will be entered into the reserve in 1963.

Bow Island:

Approximately 254 acres of levelling were completed on this project as follows:

SE 8-12-10-4	94.9 acres	50.719 cu. yds.
SW 8-12-10-4	34.0 acres	12.678 cu. yds.
SW 16-12-10-4	53.3 acres	27.115 cu. yds.
SE 17-12-10-4	71.5 acres	26,521 cu. yds.
	253.7 acres	117,033 cu. yds.

The necessary irrigation structures were completed and all this newly levelled land was irrigated prior to the end of the irrigation season.

In addition approximately 330 acres were ripped to facilitate future levelling. Two dugouts were constructed on the SW 16-12-10-4 and SE 17-12-10-4.

In late fall, 160 acres of dry land stubble were seeded to Russian Wild Rye and Rambler Alfalfa.

The following lands were purchased from adjacent farmers: NW 9, NW 16, Pt. NE 20, SE 20, Pt. NW 21 and SE 21, all in 12-10-4. In addition a Department of Lands and Forests grazing lease adjacent to the reserve was cancelled by the lessee and has now been included in this reserve. This lease consisted of the SW 17, Pt. NW 17, and Pt. SW 20, all in 12-10-4.

Grazing Associations:

Grazing Associations received assistance in the form of interest free loans to implement the improvements indicated below:

Name of Association	Amount of Loan	What Money Used For
Peace River Grazing Association	\$1,240.00	Clearing 5½ miles of fence line
Silver Valley Grazing Association	834.43	Wire and staples for fencing
Winagami Grazing Association	411.80	Wire and staples for fencing

Demonstration Plots—Wanham and Silver Valley:

Plots on the farms of Green, Wade and Fox Bros. were continued during 1962. Yield tests were taken and recorded on each plot.

ARDA

January 31st, G. R. Sterling was appointed Co-ordinator of ARDA, with an Advisory Committee consisting of the following:

- G. R. Sterling, Chairman, Land Utilization Committee, Department of Agriculture (Chairman).
 Dr. V. A. Wood, Director of Lands, Department of Lands and Forests.
 A. W. Morrison, Deputy Minister, Department of Municipal Affairs.
 F. L. Grindley, Director of Water Resources, Department of Agriculture.
 A. M. Wilson, Field Crops Commissioner, Department of Agriculture.
 J. G. McGregor, Chairman, Alberta Power Commission.
 Dr. J. A. Toogood, Professor of Soil Science, University of Alberta.
 E. S. Huestis, Director of Forestry, Department of Lands and Forests.
 W. A. Lobay, Supervisor, Soil and Weed Control, Department of Agriculture.
 W. G. Brese, Bureau of Statistics, Department of Industry and Development.
 Curt P. Smith, Director of Fish and Wildlife, Department of Lands and Forests.
 Dr. G. R. Purnell, Director, Farm Economics Branch, Department of Agriculture.

One meeting was held at which recommendations were made as to suitable projects. These recommendations for projects were not carried through to completion under ARDA because the General Federal-Provincial ARDA Agreement was not signed until December 1962. The five project agreements called for in the General Agreement were not completed before the end of 1962.

Soil and Feed Testing Laboratory:

G. R. Sterling continued as a member of the Supervisory Committee of this Laboratory. Three meetings were held throughout the year. The following table shows the samples handled during the last six years:

1957 _____	1,649	1960 _____	3,681
1958 _____	2,378	1961 _____	3,794
1959 _____	2,219	1962 _____	5,634

Below is a table showing the different samples analyzed, and a breakdown of the feed samples. Note that 853 samples of feed were submitted but analysis was done on 1,241 feeds because special analysis was performed on some feeds.

	Feed	Farm Soil	Garden Soil	Greenhouse Soil	Total for Quarter
January 1—March 31 _____	303	414	—	173	890
April 1—June 30 _____	42	608	123	89	862
July 1—September 30 _____	37	181	194	199	611
October 1—December 31 _____	471	2,494	112	194	3,271
Total for Year _____	853	3,697	429	655	5,634

There were 2 irrigation water analyses.

BREAKDOWN OF FEED SAMPLES

	Grains	Hays	Silages	Special Analyses*	Total for Quarter
January 1—March 31 _____	73	182	48	145	448
April 1—June 30 _____	18	16	8	6	48
July 1—September 30 _____	11	24	2	19	56
October 1—December 31 _____	138	254	79	218	689
Total for Year _____	240	476	137	388	1,241

* Nitrate, Prussic Acid, Carotene, Fat

REPORTS AND RECOMMENDATIONS ISSUED TO FARMERS

	Feed	Farm Soil	Garden Soil	Greenhouse Soil	Total
January 1—March 1 _____	146	142	—*	38	326
April —June 30 _____	26	267	93	24	410
July 1—September 30 _____	24	76	127	45	272
October 1—December 31 _____	203	731	80	51	1,065
Total for Year _____	399	1,216	300	158	2,073

* For the quarter January 1—March 31, garden soils were recorded with the farm soils.

Report of the Board of Trustees

THE SURPLUS WHEAT BOARD MONIES TRUST ACCOUNT

HONOURABLE H. E. STROM, Chairman

R. M. PUTNAM, Deputy Minister of Agriculture

H. W. GAEBEL, Secretary, Department of Agriculture

RICHARD BALLHORN, Farmer, Wetaskiwin, Alberta

ARTHUR PIERSON, Vice-President and Treasurer of the Independent Grain Company, Calgary.

Receipts for the year ending December 31st, 1962 totalled \$3,702.97 all of which was in payment of interest on investments.

Payments for the year ending December 31st, 1962 amounted to \$7,092.50 and were made up as follows:

Scholarships and Bursaries	\$2,100.00
Meeting Expenses	30.00
Purchase of \$5,000 Prov. of Sask. debenture	4,962.50
TOTAL	\$7,092.50

MEETINGS

A meeting of the members of the Board was held on June 20th, 1962 and scholarships and bursaries totalling \$3,650.00 were made available for the coming year.

GENERAL

The Board has continued the policy of conserving the principal in the Trust Fund, making all payments from income received on investments. The sum of \$5,000.00 was invested during the year on the purchase of Province of Saskatchewan debentures.

Since the Board instituted this policy of providing Scholarships and Bursaries the sum of \$42,951.26 has been paid out for this purpose totalling 496 in number.

LIST OF SCHOLARSHIP WINNERS NAMED DURING 1962

4-H Club Winners—\$100.00 each

George Schmidt—Wembley
 Phyllis Nickiporik—Hotchkiss
 Herbert Sellin—Northmark
 Charles Rypien—Athabasca
 Carl W. Fenton—Irma
 Jack Price—Picardville
 Dwight Smith—Gander—Strome
 Danny Hall—Sangudo
 Dwight Woody—Coronation
 Bernard Powlesland—Del Bonita
 Bill Thompson—Lomond
 Larry Winters—Indus

Carol Hill—Norma
 Beatrice Quaghebeur—Thorhild
 Ivy Withers—Lavoy
 Bonnie Walker—Winterburn
 Irene Bullick—Coronation
 Laurie Woods—R. R. 3, Edmonton
 Betty Coulter—Mannville
 Judy Paul—Millarville
 Mildred Drummond—Airdrie

To University of Alberta from Agricultural Schools—\$150.00 each

Larry Sorken—Sexsmith
 Allan Thorpe—Edmonton

University of Alberta Young People's Week—\$100.00 each

Paul Feduc—Boyle
 Carl King—Arrowwood

**Bursaries awarded to Young People Attending an Agricultural School
 —\$100.00 each**

Beverly McKay—Kathryn
 John O. Davies—Ponoka
 Neil Silver—Huxley
 Aline Jean—Lafond
 David Smiley—Lavoy
 Edward Burroughs—Mayerthorpe
 Maurice E. Hiltz—Beaverlodge
 Lillian St. Jean—Girouxville

TREASURY DEPARTMENT
WHEAT BOARD MONIES TRUST FUND
Balance Sheet as at December 31, 1962

ASSETS			
Current			
Bank Balance		\$ 2,769.09	
Accrued Interest		726.22	
			\$ 3,495.31
Investments			
	Par Value	Book Value	
Gov't. of Canada 3½% due Jan. 15/78	\$ 2,500.00	\$ 2,514.80	
Prov. of B.C. 3% due Dec. 15/69	45,000.00	44,838.50	
Prov. of Sask. 5½% due Feb. 15/82	5,000.00	4,963.54	
Prov. of N.B. 3½% due April 1/67	45,000.00	44,940.50	
Ont. Hydro Electric 4¼% Nov. 1/67	4,000.00	3,985.70	
Prov. of Newfoundland 3¼% June 1/76	4,000.00	3,917.76	
City of Calgary 3½% July 1/68	4,000.00	3,996.76	
	\$109,500.00	\$109,157.56	
Total Investment—Book Value			\$109,157.56
Total Assets			\$112,652.87
LIABILITIES			
Trust Fund December 31, 1961			\$110,930.55
Add: Surplus for 1962			1,722.32
Total Liabilities			\$112,652.87

Accrued Interest as at December 31, 1962

Government of Canada Debs.			
\$2,500, 3½%, January 15/78, 5½ months		\$	42.96
Province of British Columbia Debs.			
\$45,000, 3%, Dec. 15/69, ½ month			56.25
Province of Saskatchewan Debs.			
\$5000, 5½%, Feb. 15/82, 4½ months			103.13
Province of New Brunswick Debs.			
\$45,000, 3½%, April 1/67, 3 months			393.75
Ontario Hydro Electric Debs.			
\$4,000, 4¼%, Nov. 1/67, 2 months			28.33
Province of Newfoundland Debs.			
\$4000, 3¾%, June 1/76, 1 month			12.50
City of Calgary Debs.			
\$4000, 3½%, July 1/68, 6 months			70.00
Bank Interest			
November 1962	\$ 3,869 @ 2%	\$	6.36
December 1962	\$ 3,644 @ 2%	\$	6.19
			12.55
		\$	719.47
Add: Accum of Discount			
Accrued on Prov. of B.C.			.96
Accrued on Prov. of Sask.			.78
Accrued on Prov. of N.B.			3.31
Accrued on Ont. Hydro			1.19
Accrued on Prov. of Newfoundland			.80
Accrued on City of Calgary			.26
Less: Amort. of Premium			
Accrued on Gov't. of Canada			.55
			6.75
Net Earnings Accrued to December 31st, 1962		\$	726.22

**Statement of Receipts and Payments for the Year ended
December 31, 1962**

Bank Balance January 1, 1962		\$	6,158.62
Interest on \$ 2,500 Canada	\$	93.74	
Interest on \$45,000 Prov. of B.C.		1,350.00	
Interest on \$ 5,000 Prov. of Sask.		137.50	
Interest on \$45,000 Prov. of N.B.		1,575.00	
Interest on \$ 4,000 Ont. Hydro Electric		170.00	
Interest on \$ 4,000 Prov. of Newfoundland		150.00	
Interest on \$ 4,000 City of Calgary		140.00	
Interest on Bank Balances		86.73	3,702.97
			\$ 9,861.59
Deduct Payments—			
Scholarships—Fairview School		200.00	
—Olds School		800.00	
—Vermilion School		800.00	
—University of Alberta		300.00	
Meeting Expense—R. Ballhorn		10.00	
—A. Pierson		20.00	
Purchase \$5,000 Prov. of Sask.		4,962.50	7,092.50
Bank Balance December 31st, 1962		\$	2,769.09

Report on Farm Credit

G. R. STERLING, Executive Assistant and Chairman, Advisory Committee
K. G. TAYLOR, Farm Credit Administrator and Secretary, Advisory Committee

FARM PURCHASE CREDIT ACT

During the fiscal year April 1, 1961 to March 31, 1962, the Provincial Advisory Committee approved 451 applications, committing a total of \$2,469,829.00 in Government loans.

There were 71 Farm Purchase Boards operating at the end of 1962. The following is a list of the Counties, Municipal Districts and Improvement Districts which have formed boards up to and including December 31, 1962, along with a listing of applications which have been handled by the Provincial Advisory Committee since its inception in 1957. The figure in brackets shows the number of applications submitted to the Advisory Committee for the year 1962 only.

District	Applications Submitted to Prov. Committee	Approved	Rejected	Withdrawals	Hold for more Information	Value of Farm Lands	Loans
Athabasca	41 (10)	26	5	7	—	\$ 231,849.00	\$ 111,850.00
Barrhead	28 (25)	21	4	1	2	290,000.00	131,900.00
Beaver	135 (18)	107	23	4	1	1,332,752.00	552,870.00
Bonnyville	58 (26)	47	7	1	2	486,200.00	237,700.00
Camrose	141 (48)	114	20	4	3	1,448,615.00	694,685.00
Cardston (E.)	7 (—)	5	2	—	—	38,000.00	18,300.00
Cardston (W.)	50 (8)	41	6	2	1	542,065.90	233,102.95
Eagle	68 (21)	49	15	1	3	354,450.00	164,925.00
Flagstaff	60 (22)	50	7	5	—	487,150.00	242,775.00
Foo' hills	32 (5)	25	7	—	—	442,028.00	197,400.00
Forty Mile	45 (6)	37	4	1	3	482,988.27	218,736.63
Grande Prairie	58 (9)	42	14	2	—	430,800.00	199,050.00
Kneehill	— (—)	—	—	—	—	—	—
Lacombe	7 (—)	6	1	—	—	68,050.00	33,775.00
Lac Ste. Anne	28 (—)	15	10	2	1	136,200.00	64,074.50
Lamont	127 (27)	101	18	7	1	988,000.00	448,250.00
Leduc	91 (17)	80	6	2	2	854,485.00	414,787.50
Lethbridge	56 (12)	32	21	1	2	531,920.00	245,995.00
Minburn	84 (11)	60	19	2	2	600,410.00	286,585.00
Mountain View	46 (11)	27	18	—	1	391,800.00	185,300.00
Newell	11 (3)	7	4	—	—	81,400.00	35,860.00
Paintearth	88 (26)	81	3	2	2	624,670.00	345,355.00
Peace	3 (—)	2	1	—	—	29,000.00	14,500.00
Pincher Creek	4 (4)	2	1	—	1	45,342.00	20,000.00
Ponoka	55 (11)	46	2	3	3	649,400.00	306,650.00
Rimbey	44 (7)	24	16	3	1	236,400.00	115,120.00
Rocky View	64 (9)	58	6	—	—	910,825.95	409,941.95
Smoky Lake	— (—)	—	—	—	—	—	—
Smoky River	30 (23)	23	7	—	—	177,880.00	88,940.00
Spirit River	— (—)	—	—	—	—	—	—
Starland	43 (9)	37	5	—	—	425,020.00	205,045.00
Stettler	21 (9)	13	5	1	2	163,800.00	81,900.00
Stony Plain	13 (2)	9	3	—	1	86,500.00	41,550.00
St. Paul	27 (7)	21	6	—	—	168,700.00	82,800.00
Strathcona	11 (1)	9	1	—	1	109,250.00	50,075.00
Sturgeon River	41 (6)	26	9	3	3	372,970.00	168,675.00
Thorhild	58 (22)	40	15	1	2	282,550.00	137,200.00
Vermilion River	58 (11)	52	5	1	—	560,550.00	275,475.00

District	Applications Submitted to Prov. Committee	Approved	Rejected	Withdrawals	Hold for more Information	Value of Farm Lands	Loans
Vulcan	79 (9)	66	7	3	3	936,025.00	410,772.50
Wainwright	31 (6)	22	5	3	1	265,700.00	127,600.00
Warner	25 (3)	16	6	3	—	259,160.00	113,650.00
Westlock	153 (39)	110	33	1	4	1,146,650.00	546,750.00
Wetaskiwin	39 (11)	25	11	1	1	321,800.00	142,600.00
Wheatland	17 (3)	15	1	—	1	221,080.00	101,200.00
Willow Creek	66 (11)	44	19	3	—	677,401.00	313,384.50
Special Areas #2	76 (7)	65	5	—	—	639,570.00	313,503.00
Special Areas #3	36 (8)	31	5	—	—	373,080.00	173,390.00
I. D. # 11	38 (7)	19	15	3	1	355,100.00	155,230.00
I. D. # 22	3 (—)	1	2	—	—	16,000.00	8,000.00
I. D. # 42	— (—)	—	—	—	—	—	—
I. D. # 58	4 (—)	1	3	—	—	13,000.00	6,500.00
I. D. # 65	46 (5)	30	16	—	—	290,400.00	141,400.00
I. D. # 77	1 (—)	1	—	—	—	2,000.00	1,000.00
I. D. # 78	11 (3)	6	5	—	—	19,250.00	8,575.00
I. D. # 95	5 (1)	2	3	—	—	17,000.00	8,500.00
I. D. #101	12 (3)	7	5	—	—	41,500.00	19,100.00
I. D. #102	45 (11)	23	20	2	—	127,500.00	59,880.00
I. D. #107	4 (1)	3	1	—	—	15,700.00	7,590.00
I. D. #108	2 (1)	1	—	1	—	3,500.00	1,750.00
I. D. #109	3 (1)	3	—	—	—	25,500.00	12,750.00
I. D. #111	— (—)	—	—	—	—	—	—
I. D. #124	4 (1)	2	2	—	—	17,850.00	8,925.00
I. D. #125	16 (4)	10	6	—	—	79,500.00	34,550.00
I. D. #126	3 (1)	2	1	—	1	28,500.00	14,250.00
I. D. #131	4 (1)	2	2	—	—	13,000.00	6,500.00
I. D. #132	15 (4)	7	8	1	2	41,500.00	20,750.00
I. D. #134	12 (3)	8	4	1	1	49,000.00	22,500.00
I. D. #138	15 (3)	10	5	—	—	53,215.00	23,236.00
I. D. #139	— (—)	1	—	1	—	5,500.00	2,750.00
I. D. #146	2 (—)	1	1	—	—	6,000.00	3,000.00
I. D. #147	1 (—)	1	—	—	—	4,900.00	2,450.00
TOTALS 71	2,508 (573)	1,869	500	42	57	\$21,132,902.12	\$9,873,184.53

Of the 1869 applications approved, 424 applications have been approved in 1962, with \$2,420,220.00 committed in loans for the twelve month period.

The following list indicates the number of loans approved by the Advisory Committee by years:

1958	154	1960	453	1962	424
1959	301	1961	527		

Purchase Boards have been formed in all areas of the Province with the exception of the Municipal Districts of: Taber, Provost, Acadia Valley, Fairview and the County of Red Deer.

The Chairman or Secretary visited 17 different Farm Purchase Board meetings during 1962, and met with M.D. Councils on 2 occasions to discuss the Farm Purchase Credit Act. The operation of the Act was explained at 2 public meetings on Farm Credit, 5 Regional Conferences held for Bank Managers and 2 other meetings.

The Provincial Advisory Committee held 31 meetings during the year, and have met a total of 125 times since the Act was passed in 1957.

FARM HOME IMPROVEMENT ACT

The Farm Home Improvement Act was passed in 1959. During 1962 a total of 34 loans were made with a total value of \$52,326.00.

A total of 210 loans valued at \$330,394.00 have been made under this Act since inception.

Report of Farm Economics Branch

G. R. PURNELL, B.Sc., M.Sc., Ph.D., P.Ag., Director

Production Studies Section:

B. J. McBAIN, B.Sc., P.Ag., Supervisor

K. D. PORTER, B.Comm., P.Ag., Assistant Supervisor

G. R. KEAY, B.Sc., Agricultural Economist

Farm Management Extension Section:

T. A. S. PETERSEN, B.Sc., M.Sc., P.Ag., Supervisor

L. BAUER, B.Sc., P.Ag., Assistant Supervisor

Statistics Section:

R. E. ENGLISH, B.S.A., M.S.A. Agricultural Statistician

Marketing Section:

C. H. Ferries, B.Sc., M.Sc., P.Ag., Supervisor

A. GENERAL

This Branch was officially established in January 1961. The Dairy Cost Studies previously under the Extension Branch and earlier in the Dairy Branch, were combined with the Farm Management and Marketing Specialists from the Extension Branch to create this new unit. The Farm Economics Branch was designed to collect, analyze, interpret and distribute economic information and principles for the use of people engaged in agriculture in Alberta.

In April 1962 the Agricultural Statistics work and personnel were transferred from the Extension Branch to Farm Economics. Other new personnel in the branch employed in 1962 include Leonard Bauer, previously District Agriculturist at High Prairie, as Assistant Supervisor of the Farm Management Extension Section and G. R. Keay, a 1962 graduate of the University of Alberta, as an assistant on the production studies and statistics work. Temporary assistance on summer field work was obtained from Lawrence Copithorne and Gordon Banta, students at the University of Alberta.

A long range program for branch activities was established during the first half of 1962. This program was the result of consultation with farmers, other branches in the department, and University and Federal Department of Agriculture personnel. It will serve as a guide to action and possible growth in the years ahead. This program recognizes extension of agricultural information as a primary function but asserts the need for development, acquisition and analysis of this information on the basis of sound economic principles.

Consultation work involved a considerable amount of the time of branch personnel. Members of the staff were called on by department administrators and by farm groups to advise on matters pertaining to economics of agriculture. One of the major items here was the Agricultural Rehabilitation and Development Act (A.R.D.A.) on which the department is collaborating with the Federal government. The branch was represented on the provincial A.R.D.A. committee. This committee reviewed federal

proposals in land use, soil and water conservation, and rural development. Members of the branch were on a sub committee under A.R.D.A. which conducted a preliminary investigation on a possible pilot study area under the rural development program. An extensive report on this investigation was submitted to the A.R.D.A. committee.

Personnel from the branch assisted in setting up the Canadian Agricultural Economics Research Council. Membership is made up of representatives from the Provincial, and Federal Governments, Agri-business, Farm organizations and the Association of Canadian Universities. The purpose of the Council is to conduct research in agricultural economics.

Messrs. Petersen and Ferries lectured in Agricultural Economics at the University of Alberta on a one-half time basis during the period January 1 to May 1, 1962. This was part of a special temporary arrangement established in the Fall of 1961.

The branch co-sponsored a week long shortcourse on Industrial Methods at the University. Several District Agriculturists and other Department of Agriculture personnel attended this school on techniques of analyzing farm operations. As a follow-up to this shortcourse this branch is cooperating with the Agricultural Engineering Department at the University in running linear programs on selected farmers operations. This is on a pilot basis.

Joint Seminars on matters of common interest were established with personnel from the Federal Economics Division, University of Alberta and Farm Economics Branch. This seminar will be used as a co-ordinating, liaison and information body as much as possible.

The Branch assisted in planning a National Workshop sponsored by the Canadian Agricultural Economics Society. This workshop will be held in Alberta in 1963 on an Economics topic of national concern.

The Branch participated in a variety of major meetings including: Annual Beekeepers School, Extension Meetings with Research Station personnel at Lacombe and Lethbridge, Farm Women's Week at Olds, Irrigation Roundup at Lethbridge, Western Canada Feed Industry Conference, Six Regional Meetings of District Agriculturists Fresh Vegetable Growers Group Meetings, several Regional Meetings of Directors of Seed Cleaning Plants, Annual Meeting Lands Branch in Department of Lands and Forests, Four Farm Finance Conference Meetings for Bankers in Alberta jointly sponsored by the branch, University and Bankers Association, Annual Meeting of Veterans Land Act personnel, and 10 agricultural shortcourses in major agricultural centers throughout the province.

Members of the staff participated in approximately 25 radio programs, most of them on the Department's "Call of the Land". About 30 items were prepared for distribution in "Farm Notes" by the Radio and Information Branch.

Following is a table of activities of District Agriculturists in the field of Agricultural economics which were directly or indirectly influenced by work of the Farm Economics Branch.

Agricultural Economics Work of Alberta District Agriculturists

Topics	Individual Contact		Small Groups			Mass	
	Farm Visits	Office Visits	No. of Groups	No. of Meetings	Attendance	Meetings	Attendance
Farm Records _____	559	728	81	256	4,036	19	840
Business Analysis _____	515	618	69	169	2,508	30	1,023
Budgeting _____	197	360	57	100	1,290	■	351
Marketing and Price Outlook _____	225	902	37	66	833	10	349
Leases and Rentals _____	125	457	26	56	827	■	61
Credit _____	250	1,009	27	55	802	16	1,093
Income Tax and Estate Planning _____	71	293	33	171	924	10	597
Other _____	348	980	16	31	510	119	1,126

The Farm Economics Branch has been organized into five major sections. These are: Production Cost and Returns Studies, Farm Management Extension, Statistics, Marketing, and General Economics. The work in General Economics has been reviewed above. The activity in the other four sections follows.

B. FARM PRODUCTION COST AND RETURNS STUDIES

In 1962 this division of the Farm Economics Branch found heavy demands made upon it for consultations and to supply data and interpretation on studies previously completed or currently underway. The increasing upsurge of interest in studies previously completed such as the 20 year, total Farm Milk Studies, the Five Year Mixed Farm Study, the Five Year Taber Canning Crop Study, and the Four Year Vauxhall Irrigation Study may be attributed to several causes. First, there was an increasing awareness of the study of Farm Economics by the Extension Service and the farmers. Secondly, there was an increased interest being taken in probing of farm problems because of the A.R.D.A. program. Thirdly, there was an increasing emphasis being shown by business firms on the economic problems of farming and the seeking out of more factual information. Fourthly, the formation of a new Agricultural Economics Department at the University of Alberta made further demands on data from our studies for use in lectures and laboratory work.

The new study on Oil Seeds started in 1961 continued into its second year. Considerable additional work turned up in this study, because of the large turnover in growers. This necessitated locating new study farms to replace those farms moving out of production.

In conjunction with the Oil Seed Studies, records of costs of wheat production were taken. This division of the study was developed further than in the last year in order to provide alternative crops for comparative analysis. From the three areas under study denoted on the map there are 88 wheat enterprises, 73 rapeseed and 38 sunflower enterprises under analysis. Individual reports were initiated for all members of the study.

Some additional studies were undertaken in 1962. These studies dealt with the economics of production for the fresh vegetable crops of carrots, turnips, cabbage and onions. Considerable attention was given to marketing problems in this study.

There were 25 accounts of vegetable enterprises secured in the irrigation areas of southern Alberta. The 1962 report will be made following the disposal of the stored vegetables in the spring of 1963.

MILK STUDIES CONDUCTED IN 1962

There were 134 milk farms studied in four areas of production. All four of these areas have bulk pick-up. They fall under the Milk Pricing Orders of the Board of Public Utilities. The following table from the yearly reports set forth some illustration of the type of data recorded and analyzed. These reports were made available to each farmer on study, to Extension workers, university students studying farm economics in some of its various phases, as well as to many other individuals and institutions who follow the yearly trends indicated in these studies.

Milk Studies Conducted in 1962

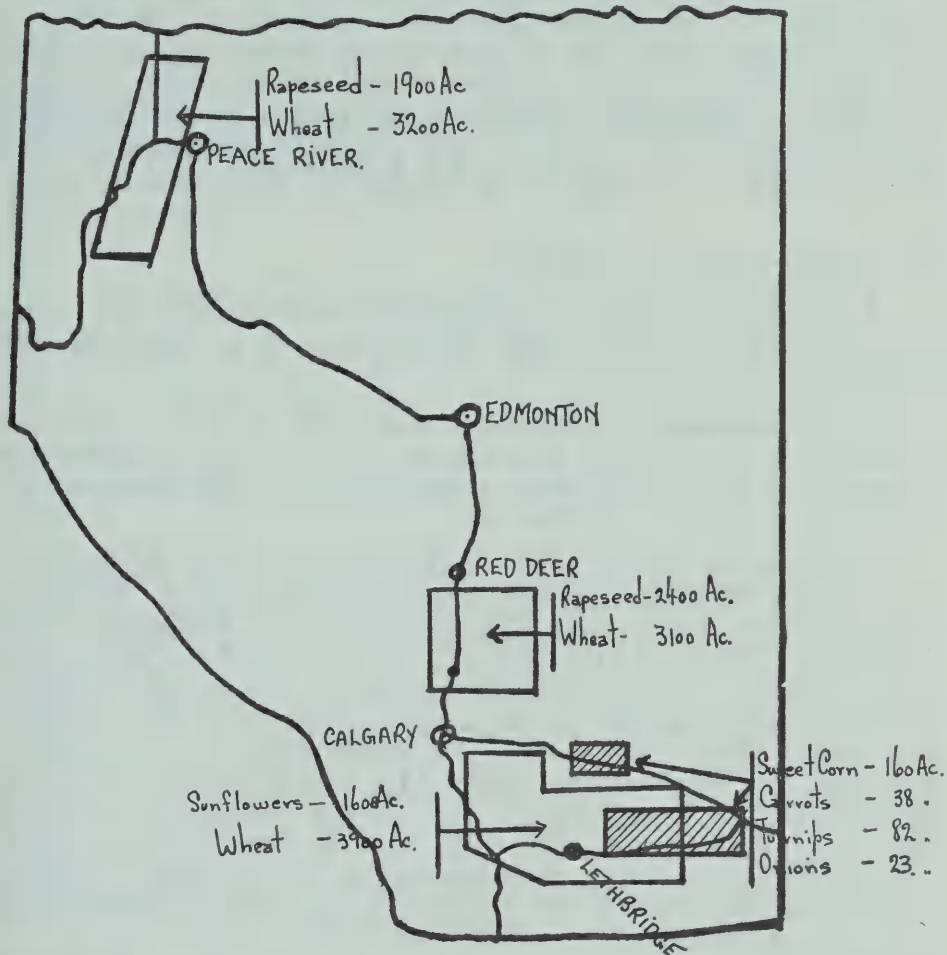
Edmonton	30 farms—detailed cost and farm management analysis
Calgary	34 farms—detailed cost and farm management analysis
Lethbridge	40 farms—feed and labour analysis
Medicine Hat	30 farms—feed and labour analysis
Total milk farms studied	134

TABLE TO ILLUSTRATE DEPTH OF ANALYSIS AND VARIATIONS
BETWEEN AREAS 1962

	Edmonton	Calgary
Number of Farms	30	30
Size of Business		
Capital Invested	57,547	63,715
Crop Acres	295	261
Number of milk cows	35.9	40.1
Labour		
Man equivalent per farm	2.3	1.9
Production man work units per man	325	415
Labour per pound of butterfat	0.33	0.31
Labour per cwt. milk	1.12	1.08
Gross operating revenue per man	8,673	9,871
Net operating revenue per man	2,792	2,332
Capital		
Operators gross revenue per \$1000 invested	354	315
Crops		
Yield per acre—Barley	37	28
—Oats	53	43
—Roughage	1.4	1.1
Livestock		
Milk production per cow	10,604	9,119
Butterfat per cow	360.7	321.4
Grain and supplement fed		
per dairy animal unit	3,122	2,491
Roughage fed per dairy animal unit	4.2	3.5
Butterfat test	3.40	3.52

OIL SEED STUDY

AREAS OF OIL SEED, WHEAT AND FRESH VEGETABLE STUDY — 1962



In 1962 the study of oil seed production costs in Alberta advanced into the second year of a three year term of research. As in the previous year, the two rapeseed areas were confined to A.R.A.'s No. 5 and No. 7 in the general locations of the Peace River and Red Deer. The sunflower study, also in the second of three years, was concentrated in the original study area in A.R.A. No. 2.

Because of the ease of mobility in annual crop planning, there was some change in the composition of the participating groups of farms. In order to establish a basis for co-operation and the assurance of adequate records, preliminary interviews were held with the farmers who entered the study in 1962. Final records for all areas were taken in the fall. There were 34 rapeseed accounts in the Peace River district and 39 rapeseed records in the Red Deer district. There were 38 accounts of sunflower seed production secured in southern Alberta.

A report on the first year study of Oil Seed production costs was published and distributed to growers of rapeseed and sunflower seed in 1962.

ADDITIONAL SIDE STUDIES

In addition to the issuance of economic reports a considerable number of supporting schedules were prepared for present and future use. Investigations into fuel consumption, the life of farm machinery, the cost of operation of individual machines, effective implement capacity, power classification, grades, weights and costs of commercial supplies were carried on and recorded in the processes of analysis. Certain of these were made available for use in extension to District Agriculturists and others.

CONSULTANT SERVICES RENDERED

An important phase of operations was the provision of consulting advice and information to occupational, professional and educational fields.

The supervisor of cost studies continued to act as a special agricultural advisor to the Milk Control Board. Details of changes in trends in production costs were provided and discussed at various times throughout the year.

Farm organizations such as the Federation of Agriculture, the Alberta Milk and Cream Producers Association, Canning Crop Growers Association, Oil Seed Growers Association and the Farmers Union of Alberta used the services of the Production Study Section. Government departments such as the Federal Economics Division, the Farm Credit Corporation, the Federal Immigration Department, and the Alberta Power Commission requested and received cost study data and in several instances received further interpretation and details. Studies in certain aspects of Field Crops, Livestock and Poultry fostered closer coordination with these branches in the Department. Mutual understanding between the University of Alberta Agricultural Economics Department was furthered in interviews and in exchange of economic data for lectures and laboratory use.

Miscellaneous

Office Consultation of one hour or more	17
Letters of Technical advice	27
Phone calls for advice	70
Board or Executive meetings	24
Bulletins released:	
Milk	450
Mixed Farming	100
Irrigation Studies	150
Oil Seed Studies	300

Special Accounting Schedules Prepared

Milk Studies	134 copies
Oil Seed Studies	130 copies
Row Crops	25 copies
Mimeo Letters	500

Short Courses and Conventions Attended

Ontario Agricultural College, Guelph, Dairy Convention, Agricultural Institute of Canada, Alberta Institute of Agrology, Linear Programming Course.

The collection of information on farm operations and farm business organization occupied a considerable part of the time available. There were 548 farm visits made during the year. Two hundred and seventy nine accounts were completed and basic data secured for reports to be released early in 1963 on farm enterprises in 8 areas of the province.

C. FARM MANAGEMENT EXTENSION SECTION

The year of 1962 was one of continuing activity and growth in farm business extension work. With the assistance of an additional staff member, a number of old requests, plus several new phases were fulfilled and added to the farm management extension program. Because the field of farm business management is in essence a coordinating function involving all of the other agricultural disciplines, greater emphasis was placed on cooperation with other branches in the department of agriculture, as well as agricultural agencies outside of the provincial department. Statistical evidence continued to show increased interest by farmers in projects and programs sponsored and supervised by the Farm Management Extension Section. As in previous years, the work of this section was beamed to farmers mainly through District Agriculturists, rather than by individual farmer contact. This not only conserves the time of the two farm management economists in this section, but also ensures local farm management extension programs which were constructed, and thus supported by the local district agriculturist, based on need as expressed by the local farmers in the area.

Following is a summary of the major areas of work undertaken by the farm management section of the Farm Economics Branch in 1962:

FARM BUSINESS MANAGEMENT SHORT COURSES AND WORKSHOPS

The two staff members in the farm business management extension section participated directly in a number of short courses and workshops for farmers arranged largely by district agriculturists, but also by chambers of commerce and other organizations interested in promoting farm economics information. Thirty-two agricultural events for farmers involved direct participation of the personnel in this section. Estimated attendance totalled 1,400 farmers.

A number of events beamed at agencies allied to farming also involved major use of farm management personnel. These were as follows:

- (1) Western Canadian Farm Credit Corporation Conference.
- (2) Veterans Land Act Conference—Alberta Section.
- (3) Farm Finance Conferences for Rural Bankers.

- (4) Industrial Methods Shortcourse.
- (5) Western Canadian Feed Industry Conference.
- (6) Soils Classification Workshop.
- (7) Western Hog Growers Conference.
- (8) University of Alberta Rural Leadership Course.

Estimated total attendance at these 8 events was 750 farm leaders.

FARM MANAGEMENT DATA MANUAL

This manual consists of a loose-leaf binder and index for use of district agriculturists and other extension staff in the department. Condensed material on farm business management was distributed at periodic intervals. Typical releases were materials on credit sources, accounting exercises, lease information, marketing, economic principles, budgeting, etc. This manual was popular and over 100 personnel in the department were on the mailing list for these releases.

DIRECT CONTACTS WITH FARMERS, DISTRICT AGRICULTURISTS, AND OTHERS

Following is a table showing approximate number of contacts by visit, phone, and letter with farmers, District Agriculturists, and other persons:

Method	Farmers	District Agriculturists	Others
Direct Visit	37	80	30
Letter	55	200	45
Phone	30	110	20

SPECIAL INTERPROVINCIAL WORKSHOPS AND COMMITTEE MEETINGS

(a) The Western Farm Management Extension Committee met this year in Edmonton to discuss items relating to farm management extension, such as uniform business terms, accounting and analysis methods. Participation involved personnel from the four western provinces, consisting of representation from each provincial department of agriculture and university farm management department. The committee is presently in the process of constructing and trying out a uniform interprovincial farm accounts book and intends to meet again at Winnipeg in 1963.

(b) An Electronic-Mail-In-Farm-Accounting workshop was attended in Montreal by one of the members of the Farm Management Extension Section. Purpose of the workshop was to inform the participants about the progress of computer use for farm accounting and analysis and to set the framework for uniform methods by the various agencies across Canada.

FARM BUSINESS ASSOCIATIONS

One of the major projects presently underway in the Farm Management Section is the Farm Business Association program.

The main purpose is to give district agriculturists an additional tool for use in their existing farm business extension program. The role that each group is expecting to fill is suggested as follows;

(a) Farmer Participant:

1. Completion of an adequate set of farm records.
2. Transferring summary material from his record book over to a comprehensive analysis sheet at a supervised workshop.
3. Completion of a few initial calculations on the analysis sheet.
4. Pays \$10.00 fee to cover a portion of the costs of analysis and report preparation.
5. Receives a written report which he can use as a guide in making adjustments in his farm operation.

(b) District Agriculturist:

1. Provide general guidance and instruction to participants.
2. Check accuracy and completeness of records on analysis sheet.
3. Discuss implications of findings with farmer.

(c) Farm Economics Branch:

1. Provide overall technical and mechanical guidance.
2. Check and complete calculations for analysis.
3. Summarize, tabulate, and analyze the records individually and on a group basis.
4. Prepare written report and interpretation of results.
5. Print and distribute written report.
6. Discuss findings with interested parties.

Objectives of such a program were (1) to give farmer co-operators additional training in record-keeping and analysis as well as making use of the analysis in farm reorganization; (2) give the District Agriculturist added confidence in working with farmers in this field; (3) provide basic financial and physical farm data for use as efficiency standards, as well as other general information about the economic aspects of farming in the district. While a pilot association has been in operation at Lacombe for 4 years, the Province wide program was officially instituted in 1962. Following is a table showing the areas involved, the number of participants, and the general type of farms involved throughout the province.

ALBERTA COOPERATIVE FARM BUSINESS ANALYSIS

District	No. of Farms Involved	General Type of Farm							Average Operators	
		Cream	Fluid Milk	Cow- Calf	Beef Feeder	Hog	Mixed	Crop	Invest. 1961	Labor Earn. 1961
Athabasca	50	4	2	4	0	8	26	6	\$49,700	\$1,770
Red Deer-Lacombe	55	3	3	5	10	8	19	7	72,200	3,450
Vulcan	9	0	0	0	0	0	0	0	114,100	2,299
Peace River	19	0	0	0	0	0	0	19	45,600	4,318
Total	133	7	5	9	10	16	45	41	—	—

In addition to the above farmer cooperators who were in official farm business associations, approximately 100 others were participating in farm business analysis with their District Agriculturist in preparation for formation of a farm business association. Groundwork was set up on new associations for the coming year to be formed at Olds, Strathmore, Taber, Mayerthorpe and Lethbridge.

HOG QUALITY STUDY

A study involving 100 hog producers in Lacombe county concerning management factors relating to quality, was completed in 1962. The information is presently being prepared for release in an extension bulletin. Upgrading of sow quality and sow management was found to be the most important factor toward increasing hog carcass quality in the Lacombe district.

LIVESTOCK LEASING ARRANGEMENT STUDY

A questionnaire has been prepared, and time allotted toward completing a study of present livestock leasing arrangements in the province with the objective of preparing an extension bulletin on suggestions and guides in setting up share livestock arrangements for cattle, hogs and sheep. Sample agreement forms in outline form will be presented as a guide to farmers and lawyers in drawing up sound livestock contracts.

MISCELLANEOUS PARTICIPATION

The staff of the Farm Management Section participated in several other miscellaneous functions during the year. Among these were (1) regional District Agriculturist planning workshops; (2) Farm Management Workshop with livestock, soils, and field crops specialists in the Department; (3) Seed Cleaning Plant business analysis; (4) Economic analysis of fertilizer results for several areas in the province.

D. STATISTICS SECTION

The main areas of responsibility assigned the Statistics Section was to (1) serve as liaison between the Alberta Department of Agriculture and the Dominion Bureau of Statistics; (2) maintain statistical references and prepare material on agriculture as may be required; (3) conduct the Alberta crop reporting service, and (4) share the responsibility of preparing agricultural outlook material for the province.

The Dominion-Provincial Conference on Agricultural Statistics was not convened in 1962. The Provinces were assured, however, that meetings will be held in 1963. A critical review of 1961 census results will be on the agenda.

The general demand for statistics of agriculture continued to increase. In addition to preparation of monthly estimates of farm cash income published by the Department of Industry and Development and the annual "Summary Statistics of Agriculture for Alberta", considerable progress was made toward compiling material relative to a statistical history of agriculture in Alberta.

The crop reporting service was continued. Regular crop reports were issued bi-weekly throughout the summer (a total of 12) and 13 summaries of conditions were prepared for publication by the Dominion Bureau of Statistics. The "Autumn Survey", a comprehensive review of production and marketing for the first 9 months of the year was issued in November.

Although below average in the southeast, crop yields were higher than in 1961 in most areas. The most serious limiting factors were drought in the south and frost in the north. The incidence of hail was widespread but below average in total. Grasshopper infestations were more widespread than forecast but control measures were generally effective. Losses from other pests and diseases were light.

Wet weather in the first part of September delayed harvesting operations, and it was in this period that frost damage occurred. Subsequent fine weather permitted completion of harvest in all but the Manning-Fort Vermilion area.

Average yields in bushels of principal crops for the province (with 1961 yields in brackets) were: wheat, 19.3 (15.8); oats, 46.5 (36.9); barley 31.3 (27.0); flax, 10.0 (10.4); fall rye, 15.6 (14.1); and spring rye, 13.2 (8.8).

According to Alberta Wheat Pool estimates the quality of grain threshed was much below average.

WHEAT

	No. 1° and 2°	No. 3°	No. 4°	5, 6, and Feed	Durum	Other
1960	30	46	14	4	2	4
1961	63	24	4	1	2	6
1962	16	16	21	40	3	4

OATS

	2 C.W.	3-C.W.	X1 Fd.	1 Fd.	2 Fd.	Other
1960 .....	.....	3	30	59	7	1
1961	1	6	26	60	7	.....
1962 .....	.....	2	28	62	8	.....

BARLEY

	1-3 C.W.	6-Row	1-3 C.W.	2-Row	Feed Grades
1960	15	.....	7	.....	78
1961	22	.....	7	.....	71
1962	9	.....	5	.....	86

Despite some liquidation in the south owing to drought in 1961, cattle numbers were maintained in 1962. However, sheep numbers decreased 10 percent and hogs 20 percent from the previous year.

Cash income from the sale of farm products, the highest on record in 1961, increased again in 1962. Livestock and grain receipts accounted for most of the increase. Income from the sale of poultry and eggs increased and dairy receipts were maintained.

Net cash farm income figures were not available at time of writing. However, while production costs have increased, net returns to farmers will exceed \$234 million which was the amount received in 1961.

This Section cooperated with the Marketing Section to prepare an Alberta publication on the Alberta agricultural situation and outlook. More details on this publication is found elsewhere in this report.

E. MARKETING SECTION

POULTRY STUDY

Data is now complete for the first year of a three year study of input-output relationships and marketing channels for a selected number of commercial egg producers. Of 16 co-operators who began the study, 13 submitted usable records. An interim statement dealing with expenses, revenue, rate of lay, and mortality of the layers was sent to each of the co-operators about mid-way through the year. Several calls were made to the farms of these egg producers, in order to help them in keeping the proper accounts. Assistance was also given to the poultry inspectors in guiding them to an understanding of the implications of sound record keeping. These inspectors were responsible for the collection and accuracy of the records submitted by the poultrymen. Analysis of the data for the first complete year progressed to the point where a statement concerning the actual cash costs and returns in producing a dozen eggs may be shown.

OUTLOOK NEWSLETTER

A considerable amount of time was spent in developing and preparing a situation and outlook report called the "Alberta Farm Economist". The first issue was mailed to about 6,000 persons, including Alberta farmers, agri-businessmen, and others, who were concerned with agriculture in Alberta. The "Alberta Farm Economist" will be a quarterly publication dealing with matters of production, marketing, and outlook. It should prove helpful to farmers as well as to marketing agencies in their production and marketing decisions.

Several talks were given at various centers to farm groups throughout the Province concerning marketing, agricultural policy and the use of credit. Two dozen persons visited the office seeking advice in these areas of economic activity. In addition, there was a considerable amount of inter-departmental consultations.

